

Rural District of Chester-le-Street.

THIRTEENTH

ANNUAL REPORT

OF THE

MEDICAL OFFICER OF HEALTH

ON THE

Health and Sanitary Condition

OF THE DISTRICT

FOR THE YEAR 1907.

DURHAM :

THOMAS CALDCLEUGH & SON, 45, SADDLER STREET.

CHESTER-LE-STREET.

TO THE CHAIRMAN AND MEMBERS OF THE RURAL DISTRICT
COUNCIL.

GENTLEMEN,

I herewith submit for your consideration my Annual Report on the Health and Sanitary Condition of your district during the year 1907.

In doing so, I must thank your Council for your continued confidence, and for the courtesy I have received from you throughout the year.

I am, Gentlemen,

Your obedient Servant,

JOHN TAYLOR.

28th February, 1908.

INTRODUCTORY.

The Report of Dr. Fletcher, one of the Medical Inspectors of the L.G.B., on the sanitary state of your district, has been received and duly considered by your Council. With the exception of the recommendation to adopt Part III of the Housing of the Working Classes Act, 1890, and one other recommendation, the consideration of which has been postponed, all the recommendations made by the Inspector have been agreed to by your Council, and the necessary machinery is being prepared for carrying them out.

The Medical Inspection of School Children is now an accomplished fact, and although the authority invested with the execution of this work is the County Council, yet I think it of sufficient importance to you to shortly comment on the subject.

An elaborate Memo. has been issued by the Board of Education, in which the intention of the Board is evidently to combine the examination of the children with the work of the Medical Officer of Health. "That is to say, generally speaking, the work of inspection should be supervised by the M.O.H. of the Authority which appoints the Education Committee." In Counties this officer is the County M.O.H., and under his supervision falls the Medical Inspection of Children. The Memo. apparently desires the local M.O.H. to be the inspector in all possible cases, for further on there occurs the following passage (para. 13 *e*) :—"In order to secure effective bases for comparison of the work done in different parts of the County, one uniform year must be taken in order to correspond with the annual period fixed for the closely related report of the Medical Officer of Health." Doubtlessly, this extract can be read into meaning the County M.O.H., but it appears to me that the officer meant is one who is required by the L.G.B. to make an annual report on the health and sanitary condition of his district, and who is further required to send a copy of such report to the L.G.B.

To me this idea is further strengthened by the Instructions issued by the L.G.B. to Medical Officers of Health as to their Annual Reports, from which I give the following extract :—

"It is the desire alike of the Local Government Board and the Board of Education that the relations of the *local** Public Health Authority and the Local Education Authority, *whether or not* these bodies or their officers happen to be identical, should be intimate and cordial in order that the administrative procedures of both bodies should be reciprocally helpful.

* The italics are mine.

“ In this connexion special attention should be given to the particular section of the Memorandum of the Board of Education entitled ‘ Organization,’ with which the Local Government Board are in full agreement as illustrating the inter-relations of Sanitary Authority and Education Authority that deserve fostering and development.”

The Local Education Authority (the County Council) proposes three medical examiners, and the number of children to be examined annually is about 45,000. The schedule of this Inspection is of sufficient interest to you to be included in the appendix to my report. If this is perused, I am sure no one would consider three examiners more than able to touch the fringe of the work mapped out. Even with the assistance of the teachers, 5,000 children per annum would be the maximum number any one is capable of examining.

Whilst your Council may not have anything to do (collectively) with this examination of school children, yet your Council is charged with the sanitary supervision of the surroundings of these children, and it appears to me that the two things are so closely knitted together that I think some better arrangement than that suggested by the Local Education Authority might have been arrived at. On the other hand, one must admit that the administration of the Memo. is most difficult in those cases where the local Sanitary Authority and the Local Education Authority are different bodies.

Two important Acts of Parliament become operative on the 1st January, 1908, the adoption of which is optional on your Council, viz.: the Notification of Births Act, and the Public Health Amendment Act, 1907.

The latter, an Act of much importance and one simplifying many points of procedure, your Council has resolved to adopt, and to make application to the Local Government Board for powers to put it into operation.

The Notification of Births Act has been considered by a Committee of your Council, and will be further considered at a future date, after the County Council has given the County a lead. This Act provides for the supervision of the newly-born, where necessary, and provides for your M.O.H. being notified of the birth of each child.

Unfortunately, the Act has met with much opposition from the Medical world, chiefly on the plea that such notification will cause a breach of confidential knowledge, which the medical practitioner may become aware of. I confess I fail to see any real objection in this assertion. In the first place, all births, illegitimate as well as legitimate, must be registered, and as a rule parents, especially young parents, are generally in a frightful

hurry to publish in the newspapers the birth of every child born to them, and many do not even wait for the doctor leaving the house before a pile of notices of the event is dispatched to relatives.

The adoption of the Act imposes on the adopting authority the engaging of Health Visitors, whose duty would be to visit such cases as would be considered advisable, cases where obviously advice as to the feeding and clothing and keeping clean of the child would be advantageous to the infant, and if this visiting be done by one endowed with patience and tact, it will be welcomed by the parent. There is a fear, on the part of some, that such visiting would be resented by the parent. I do not think so, but if in some odd case, where strong resentment is expressed, the tact of the visitor would be exhibited by omitting this house in the future. The health visitor would find other work to do than merely giving attention to the new-born infant. I am positive that any money spent on health visitors would be well spent, and would, undoubtedly, be a splendid investment.

POPULATION.

The population of your district shows for the year a considerable increase, ten townships having enlarged their population; seven townships remain the same as last year; and two townships, viz., Burnmoor and Plawsworth, having a small decrease. The greatest increases are in the townships of Chester-le-Street, Witton Gilbert, Usworth, and Lamesley. The decrease in Burnmoor and Plawsworth is due to the closing of insanitary houses.

A very considerable number of houses have been built in your district, but this has not improved the sanitary condition of many of the old houses in the least. The new houses have evidently been occupied by persons formerly living outside your district, and this is the case in the vast majority of these new houses.

Some of the old insanitary houses have been closed, and the number of such will be found further on in this report, under the heading of "Unhealthy Dwellings."

I estimate the population of your district, at the middle of the year, to be 72,911, an increase of 2,027, or 2·85 per cent., as compared with an increase last year of 2·75 per cent. The population, as in previous years, has been estimated by multiplying the number of inhabited houses (as given by the assistant overseers) by the average number of persons per house at the last census.

The number of births in excess of deaths is 1,335, as compared with 1,393 last year, and 1,381 during the previous year.

The census population, the number of houses given in the census returns of 1901, the average per house then, the number of inhabited houses given me by the assistant overseers, the estimated population, and the increase or decrease of the population in each township, are given in detail in Table XIV.

MARRIAGES.

The number of marriages contracted during the year in your district has been 556, as compared with 552 last year, and 487 during 1905. There is only a slight increase of 4, but if the population of your district is considered there is a decrease compared with last year. The marriage-rate for the year is 15·25 per 1000, as compared with 15·50 last year, and with 14·1 per 1000 for the previous year, and is somewhat below the average for the past ten years (15·6).

The marriage-rate for England and Wales for the year ending 30th September, 1907, is 15·8 per 1000.

Marriage-rate from 1896 to 1907 inclusive :—

YEAR.	NUMBER.	RATE PER 1000.
1896	461	16·2
1897	469	16·4
1898	490	16·6
1899	444	15·2
1900	458	15·1
1901	492	16·1
1902	515	16·4
1903	470	14·5
1904	545	16·3
1905	487	14·1
1906	552	15·5
1907	556	15·2

BIRTHS.

The number of births registered during the year is 2,534, as compared with 2,589 last year, and with 2,602 during 1905. A considerable decrease is thus seen. The birth-rate is only 34·75 per 1000, as compared with 36·52 per 1000 last year, and 37·71 per 1000 for 1905. This year's rate is the lowest rate for the past decade, and is 3·55 per 1000 under the average for the past ten years. The birth-rate for the Administrative County for the year is 34·8 per 1000, or 0·5 per 1000, below the average for the decade; and the birth-rate for England and Wales is 26·3 per 1000, or 2·1 per 1000 under the average for the past ten years.

During the first quarter of the year the rate was again below that of the fourth quarter of last year, and the second quarter

was the same as the first. There was a sharp fall during the third quarter, and the fourth quarter was still lower.

Of the townships whose population is over 1,000, the birth-rate is highest in Pelton (43·69), Usworth (40·76), Birtley (40·75), and Lumley Great (38·92), and lowest in Ouston (18·39), Lamesley (26·53), Waldrige (26·82), and Harraton (26·94).

During the year 86 illegitimate births have been registered. This is equal to 3·39 per cent. of the total births.

First Quarter, Births	..	664	..	Rate, 36·42 per 1000,
Second	„	665	..	„ 36·48 „
Third	„	623	..	„ 34·17 „
Fourth	„	582	..	„ 31·92 „

DEATHS.

The number of deaths registered during the year has been 1,189, as compared with 1,169 last year, and 1,216 during 1905. There is an increase of 20 for the year. The nett number of deaths of persons belonging to your district is 1,199. The general death-rate is 16·44 per 1000, as compared with 16·49 per 1000 last year, and 17·62 per 1000 during the previous year. The rate this year is very inconsiderably under last year's, viz., 0·05 per 1000, and is under the average of the past ten years by 1·74 per 1000.

The death-rate for the Administrative County is 17·0 per 1000, and for England and Wales the rate is 15·0 per 1000.

The year was cold and inimical to the prevalence of diseases whose habitat is in the intestinal canal.

Premature birth caused many deaths, though somewhat fewer than last year. The number of deaths from this cause this year is 65, as compared with 83 last year. How much of this wastage could be prevented is probably hypothetical, but undoubtedly much of it can be prevented. The falling birth-rate and the continuance of premature births may appear unconnected, but there is a close relation between them. There is a decided tendency to lessen child-production in the married. This is easily proved. Look at the numerous advertisements in all sorts of newspapers, of remedies to correct, as is said, “all irregularities” in females, and without doubt the use of these infanticidal poisons is on the increase, and that increase is going on amongst the most fertile of our population. The use of these remedies injures many unborn children, and accomplishes what they are intended to do, abortion, death to the infant, and permanent injury to the mother, rendering her unable to carry on the most important function nature intended her to do, viz., the reproduction of her species.

It is difficult to fully enumerate all the wastage from the death of immature children, but it is much greater than it is generally supposed to be.

The premature deaths this year are 14·0 per cent. of all those who have died under one year, as against 19·6 per cent. last year.

Diseases of the Respiratory Organs (Pneumonia and Bronchitis) are considerably more numerous this year than last year, viz., 193, as compared with 148, and 241 during 1905. This is readily accounted for by the cold, wet year, whilst 1906 was a comparatively warm year. Of these, 61 died under one year old, as compared with 41 last year and 86 during the previous year, and this equals 16·0 per cent., as compared with 27·7 per cent. last year, and 35·6 per cent. during the previous year.

The deaths from Diarrhœa were very much fewer, viz., 42, as compared with 101 last year, and 92 during the previous year. Of these, 33 died under one year old, being 78·5 per cent., as compared with a percentage of 76·2 last year, and of 79·3 per cent. the previous year. Of the 33 who died under one year old, 8, or 25·2 per cent. died before they were 3 months old, as compared with 18·4 per cent. of the same class last year. The marked decrease in Diarrhœa mortality this year is entirely due to climatic conditions, a cold, wet year.

Of the several quarters, the greatest number of deaths occurred during the fourth quarter, and the least during the third quarter.

First Quarter	....	Deaths, 310	..	Rate, 17·00	per 1000.
Second	„	....	„	279	.. „ 15·30 „
Third	„	....	„	257	.. „ 14·09 „
Fourth	„	....	„	343	.. „ 18·81 „

The general death-rate for each township will be found in Table XIII. The highest rates in townships having a population of 2,000 and upwards are: Pelton (20·40), Birtley (19·16), Lumley Great (18·96), and Edmondsley (17·65); and the lowest rates are in Usworth (12·58), Lamesley (14·78), Harraton (14·99), and Witton Gilbert (15·47). For the third year in succession Pelton and Lumley Great hold a high place in high death-rates. and Lamesley and Harraton are again amongst the lowest.

Deaths from the seven chief Zymotic Diseases, viz., Small-pox, Measles, Whooping Cough, Diphtheria and Membranous Croup, Fever (Typhus, Typhoid or Enteric, and Continued), and Diarrhœa number 114, as compared with 172 last year, and 214 during 1905. This gives a zymotic death-rate of 1·56 per 1000, as compared with a rate of 2·42 per 1000 last year, and a rate of 3·10 per 1000 during 1905. The rate for the Administrative County is 1·98 per 1000, and for England and Wales the rate is 1·26 per 1000.

Excluding townships with a population under 2,000, the rate is highest in Pelton (3·02), Lumley Great (2·97), Edmondsley (2·52), and Birtley (2·15); and lowest in Harraton (0·33), Urpeth (0·88), Washington (0·94), and Usworth (1·04).

The following table gives the deaths from Zymotic diseases during the past three years :—

DISEASE.	1905.	1906.	1907.
Smallpox	0 ..	0 ..	0
Scarlet Fever	9 ..	4 ..	2
Measles	46 ..	9 ..	45
Whooping Cough	43 ..	23 ..	4
Diphtheria and Membranous Croup	10 ..	29 ..	19
Fever (Enteric and Continued)	14 ..	6 ..	2
Diarrhœa	92 ..	101 ..	42

INFANTILE DEATHS.

The number of children dying under one year of age is 376, as compared with 422 last year, and 467 during the previous year.

This gives an infantile death-rate of 148·3 per 1000 born, as compared with a rate of 163·0 per 1000 born last year, and with 179·4 per 1000 during the previous year. There is a satisfactory decline of the death-rate this year, and this fall depends not on any real sanitarily improved conditions, but on the climatic conditions of the year, which reduced the deaths from Diarrhœa from 101 to 42. If the difference between these numbers be added to the deaths of this year, there will be an infantile death-rate of 171, as compared with 163·4 per 1000. The infantile death-rate for the Administrative County is 136 per 1000, and for England and Wales the rate is 118 per 1000 born.

In townships having a population of 2,000 and upwards the highest rates are in Pelton (201), Lumley Great (192), Edmondsley (168), and Birtley (159); and lowest in Usworth (90), Washington (122), Harraton (135), and Urpeth (144).

The townships of Pelton and Edmondsley were amongst the highest last year as well as this year, whilst Harraton is again amongst the lowest.

The high infantile death-rate is a subject which has been engaging the attention of sanitaricians and others for years. Whilst the general death-rate for England and Wales has steadily fallen during the past thirty years, there has not been a corresponding decline in the deaths of infants. The causes of very early death are manifold, some of the causes affecting the

child before birth, others after birth. Of the former or prenatal, alcoholism of the parents takes a prominent place; and of the two parents, drinking habits of the mother are much more harmful than those of the father. Alcohol is, undoubtedly, a poison to the young. Drunk by the mother, it circulates in the vessels of the unborn; its action on the mother lowers her healthy state and makes her less able to nourish her unborn child than if she were living a sober life. She would then take her food plentifully, her organs would be healthy, and she would be able to produce a healthy offspring. These assertions are not made haphazard, but are the results of experiments of well-known men of repute, who have proved that enfeebled offspring are produced by feeding a lower animal on a proportion of alcohol daily during pregnancy.

Other prenatal agencies are at work besides alcohol, *e.g.*, Tubercular diathesis, inherited or acquired Syphilis, want of proper nourishment of sufficient quantity, and all other agencies which tend to enfeeble the constitution. After birth the child has to meet again some of the conditions which tended before birth to enfeeble its constitution. A drunken parent before birth is a drunken parent after birth. The milk the child gets may be poor, the feeding is haphazard, the house is dirty, and the atmosphere foul-smelling. Again, the clothing is neglected, and the child is perished with cold or left in a foul, stinking, urine-soaked dress. It is allowed to crawl on a dirty floor, and is a ready victim of every injurious organism which is found in a dirty house. Should the breast feeding become troublesome, or the milk be deficient, improper foods are given; a fretful child is quieted by some nostrum containing opium, or alcohol is given to quieten it. The consequences are that a fretful and weakly child fades and dies in early life.

Amongst illegitimate infants there is a much larger death-rate than amongst legitimately-born children. The death-rate amongst the latter is 144·2 per 1000 births; the illegitimate died this year at the rate of 267·4 per 1000 born. This may not affect the infantile death-rate to a very great extent, yet it adds to it, and eloquently points to the assertion that the less attention a child gets after birth, coupled with little attention before birth, either to the health of the mother or to the nourishment of the unborn child, the greater the chance of the infant dying at a very early period of its existence apart from the mother.

Besides acts injurious to the child committed by the parents, such as I have enumerated, there are insanitary conditions surrounding the child. The damp, musty house, wet soil in the

vicinity of the house, foul ashpit-privies, are amongst the chief causes for which the parent is guiltless, and are the causes removable by the powers conferred on a health authority.

Whilst old houses are injurious, it must not be forgotten that many of the new houses now erected are much more injurious to the infant. Many of our new houses are really unsuitable for comfort, and are injurious to health. The rooms are little better than box rooms, probably there is no fireplace, and frequently the only trifle of fresh air is that got through a badly-fitting door or window-sash—in fact, the flimsy material, the unseasoned wood (which pines as soon as any heat is applied to it), the rattling window-sash, are the salvation of the family in those houses I have just described.

It is to be hoped that any future legislation will provide for (1) a minimum floor space, (2) a fireplace in each room, and adequate yard-space for each house.

The General Death-rate, Zymotic Death-rate, and Infantile Death-rate since 1887 are shown in the following table :—

Death-rates from 1887 to 1907 inclusive :—

YEAR.		GENERAL DEATH-RATE.		ZYMOTIC DEATH-RATE.		INFANTILE DEATH-RATE PER 1000 BORN.
1887	..	18·87	..	..	..	201·0
1888	..	18·16	..	..	..	177·7
1889	..	18·50	..	2·30	..	166·0
1890	..	19·50	..	3·30	..	172·6
1891	..	19·90	..	2·10	..	174·9
1892	..	19·10	..	2·50	..	146·1
1893	..	20·80	..	3·40	..	177·6
1894	..	20·10	..	3·30	..	177·0
1895	..	19·70	..	2·27	..	183·0
1896	..	19·00	..	3·72	..	182·0
1897	..	16·50	..	2·17	..	147·5
1898	..	18·35	..	3·41	..	198·8
1899	..	18·44	..	2·93	..	169·0
1900	..	20·26	..	2·44	..	197·7
1901	..	19·26	..	3·41	..	177·3
1902	..	17·29	..	1·89	..	137·5
1903	..	18·81	..	2·34	..	174·6
1904	..	18·50	..	3·07	..	191·6
1905	..	17·69	..	3·01	..	179·4
1906	..	16·59	..	2·42	..	163·0
1907	..	16·44	..	1·56	..	148·3

The following tables give the chief rates for your district, for the Administrative County, and for England and Wales :—

	CHESTER-LE-STREET.	ADMINIS- TRATIVE COUNTY.	ENGLAND AND WALES.
Estimated Population	72,911 ..	832,900 ..	34,945,600
Birth-rate per 1000 population	34·75 ..	34·80 ..	26·30
Death-rate „ „	16·44 ..	17·00 ..	15·00
Zymotic Death rate „	1·56 ..	1·98 ..	1·26
Infant Mortality per 1000 born	148·30 ..	136·00 ..	118·00

Death-rate per 1000 Population :—

Smallpox	0·00 ..	0·00 ..	0·00
Scarlet Fever	0·02 ..	0·06 ..	0·09
Diphtheria and Membranous			
Croup	0·26 ..	0·20 ..	0·16
Fever (Enteric and Continued).	0·02 ..	0·10 ..	0·07
Measles	0·61 ..	0·69 ..	0·36
Whooping Cough	0·05 ..	0·30 ..	0·29
Diarrhœa	0·57 ..	0·59 ..	0·29
Enteritis	0·08 ..	0·14 ..	..
Phthisis	0·79 ..	0·97 ..	..
Other Tubercular Diseases	0·79 ..	0·80 ..	..
Respiratory Diseases other than			
Phthisis	2·64 ..	3·09 ..	..

PHTHISIS.

The number of deaths from Consumption this year is 58, as compared with 81 last year, and 61 during the previous year. This at first sight is very satisfactory, but, if the average for the past ten years is taken, the brightness of the figures is considerably dimmed. The average for the decade 1897–1906 is 66, and it is thus seen that the fall is inconsiderable. The death-rate is 0·79 per 1000, as compared with 1·14 per 1000 last year, and 0·88 per 1000 for the previous year. As is well known, Consumption is caused by the presence in the lungs of a vegetable organism whose tendency is to increase, and, whilst living on the lung tissue and destroying it, excretes something which is injurious to the animal economy, ultimately causing the death of the host. This organism, as is equally well known, not only attacks the lungs, but also nearly all the other organs and tissues of the body, such as the bones, bladder, glands, peritoneum, the membranes of the brain, &c.

The deaths from tubercle of organs other than the lungs are classified as deaths from “other Tubercular Diseases,” and number 57, as compared with 43 last year, and with an average

of 58 for the past ten years. The number of deaths from Tubercle is 115, as compared with 124 last year, and with 114 for the average of the decade.

For all practical purposes, the death-rate from Tubercle in your district is stationary, or very nearly so, but in England and Wales generally there has been a considerable decrease during the past few years.

In reviewing Phthisis, the great desire for cure or prevention of this scourge must always be uppermost. In England and Wales it is computed that nearly half a million people are suffering from Consumption, and in your own district we have annually 450 to 500 persons suffering from Consumption in its various stages. It is a moot question whether cure or prevention is the more important, but, since so very few cures really take place, it appears to me that sanitary authorities should bend their greatest energies on prevention. And there they meet the greatest of difficulties. It may not be quite a settled question as to the origin of Consumption—by which I mean the source of the greatest number of fresh cases. Many believe, and probably this has been the belief of nearly everyone, that Consumption is got from a person already suffering from Consumption—in other words, that it is an infectious disease, one person affecting another who has been in contact.

It is certain that everyone is not equally susceptible. Some are readily affected ; some as readily destroy the infecting organism.

Last year I called attention to the age-periods for Consumption and for other Tubercular Diseases. In Consumption or Tubercular Disease of the Lung 75 per cent. died after reaching 15 years of age, whilst in Tubercular Disease of other parts of the human body 76·7 per cent. died before reaching 15 years. This year the figures for the same diseases are 93 per cent. for Consumption over 15 years of age, and 84 per cent. for Tubercular Diseases not in the lung under 15 years.

It is recognized that Tubercular Diseases of organs other than the lung is produced by the ingestion of foods containing active tubercle bacilli, and, of such foods, milk is, undoubtedly, the chief. A child partakes, as a general rule, of a large quantity of milk as its food, and as generally, is that milk given in the raw state. It is proved that a large quantity of milk contains live tubercle bacilli, even as much as 14 per cent. of all milks examined. In L. 698 samples were examined, and 70, or 10 per cent., contained tubercle bacilli. In B., in a very large number of samples, 14 per cent. were found to contain tubercle bacilli. Many other examples could be given showing the large quantity of milk which contains the living organism which

produces Consumption, and similar diseases of parts of the body other than the lungs. It is the presence of tubercle bacilli in milk which, undoubtedly, is the cause of the very large majority of cases of Tubercle in children. There is ample evidence to prove that milk containing tubercle has caused tubercle in those partaking of it. A most striking case is quoted by Olivier, who observed that in "A boarding-school 12 young girls became ill with signs of intestinal Tuberculosis, and 5 of them died. All came from healthy families, and no source of infection was found but one cow which supplied milk for the school, and was shown to be affected with Tuberculosis of the udder." The udder is not the only source of tubercle in milk. The large quantity of tubercle coughed into the atmosphere of a byre is at least a probable source of many organisms which are in milk, and it is not yet proved that organisms produced elsewhere than the udder do not find their way into the milk excreted from the udder whilst it is yet in the udder. At any rate, all are agreed that early tubercle of the intestines is most likely produced by ingested organisms, and that of all foods milk is most generally the chief carrier.

It can be easily proved that substances, *e.g.*, coal dust, partaken of by an animal, readily find their way into the lungs, and are there deposited in tiny masses.

It is known that certain intestinal parasites live their early life in the lung. The ova of this parasite are carried to the lung by the breath, there to live until a certain stage of development is reached. In fact, the lung is the incubator of the maw worm. From the lung the partly-developed worm migrates to the intestinal canal, there to mature, to be able to reproduce its species so far as the production of the eggs are concerned, and the cycle commences again.

With these facts before us, facts which cannot be disputed, it is not difficult to believe that organisms may develop in the intestines, or in the glands near the intestines, and there remain until some tissue of the body, by age, becomes an ideal soil for their growth. That certain tissues of a certain kind will only grow certain diseases is well exemplified in Cancer. Seldom is Cancer of the female breast seen before 40 years of life, and other examples of a similar nature could be given. Some observers believe that in the very great majority of cases of Consumption the original organ to be affected is the intestines, that this infection in most cases takes place in early life, that the organism either kills at an age below 15 by causing disease of organs other than the lung, or that the organisms migrate to the lung at an age at which the lung becomes a suitable nidus for their growth. That this reasoning is applicable to probably all cases or nearly to

all cases, and that where all members of a family are swept off with Consumption, the *modus operandi* of the disease was that the organisms thrown off by the breath of the affected person were swallowed by a healthy one, and reached the lungs from the intestinal canal. I do not mean to say that it is impossible for organisms to be inhaled, and for the disease to start *de novo* in the lung, but that this method of infection is far from being the usual way. Assuming that this is the method of infection, and that milk is a carrier of tubercle bacilli, and thus of infection, one would naturally ask, "Is there much tubercle amongst cows?" and secondly, if so, is tubercular disease increasing or decreasing amongst milk cows and cattle generally?

During recent years very reliable information has been acquired of the presence of tubercle in cattle. "In Copenhagen 30 per cent. of mature cattle are affected; the same is true in Odense, while Arrhus reports a greater percentage." "Bang regards it as probable that in Denmark half of the small herds of from 1 to 9 members are free from tuberculosis, but only a fourth of the herds of medium size of from 10 to 49 animals are free, and of large herds only a few are exempt."

In this country the president of a Butchers' Association says, "If the disease (Tuberculosis) was to be allowed to increase at the rate it had in recent years, there would be few herds of cattle throughout the country altogether free from Tuberculosis."

These are serious allegations, and have been made by those who would not use such words unless the case was as serious as it is painted.

"If one considers that feeding tuberculosis is by no means infrequent in man, and occurs quite frequently in children, that human tuberculosis is often transmissible to cattle, and that clinical knowledge argues for transmission of bovine tuberculosis to man, and if one considers that tubercle bacilli from cattle have been proved at least as dangerous and generally more virulent for all animals than tubercle bacilli from man, then milk containing tubercle bacilli must be regarded as most dangerous to health. Therefore it must be one of the most important purposes in milk control to prevent the sale of such milk."

In combating Consumption I am firmly convinced that one must commence with attempting to prevent the invasion of the body whilst pursuing the attempts to cure those already affected. One line of attack is to provide milk free from tubercle bacilli. This is a huge task, and, as the law is at present, all but impossible. Before we can do any real good here, there must be a public control over milk supplies. Milk may be sterilized, but there may be difficulty here from a financial point. Sterilized

milk is not so pleasant to the palate as raw milk, but this is readily overcome by the taker, and in a very short time one is not able to detect much difference, and certainly sterilized milk is not unpleasant to take. The difficulty, formerly experienced, of amalgamating the cream with the milk, being overcome, the richness of the milk in fats is not lessened. It is said that boiling the milk alters the digestibility of the casein, but probably it does not do so, though it destroys the ferment galactose in milk, and to some extent increases the difficulty of the digesting of the milk.

Another method to improve the wholesomeness of the milk is, cleaning by centrifugal force. This process can be adopted, cheaply, by every milk-seller, and would free the milk from many inert impurities as well as from a considerable number of bacteria. The cleaning process of milk would not in any way entail any appreciable cost to the producer, and I consider that in any future legislation respecting milk the seller should be required at the very least to cleanse his milk by centrifugalization.

There are only one or two points regarding the cleansing and keeping clean of milk. To go into more details would be to increase inordinately the length of my report. Other points to attend to are: better byres, more cleanliness there, cleanliness of the milker, good and wholesome water supply to the byres, good places for storing the milk, and, above all, greater carefulness in the cleanliness of the distribution. Instead of milk being measured out of an open churn by a measure covered with dust, it should be sent out in small cans, each can being handed over to the purchaser without being opened in the dusty streets.

Having said something about the production of Consumption from foods, one turns to the side of the treatment of the disease when once produced, from the standpoint of public health. Without being too particular as to whether the disease is ever "cured" or only "arrested," it is a herculean task to assail. When I estimate that in your district there are 450 persons always suffering from Consumption, and as many more from the same disease outside the lungs, and that 60 to 70 fresh cases of Consumption, and as many outside the lungs, occur every year, its magnitude is readily seen.

Sanatoria are doing good, without doubt, but probably too much good has been expected from this method of treatment. Unless the case is got under treatment in its early stages, permanent arrest rarely occurs. It is very difficult to discover the cases at their earlier stages, and amongst the working classes a man naturally works as long as he is physically able, and will not and cannot afford to give himself such treatment in a sanatorium as would most likely do him any real and lasting

good. Again, Sanatoria are refusing cases where any real benefit cannot result, and consequently, with all the money being spent on the cure and treatment of Consumption, the results are below what one would hope for, and certainly much under what was some short time ago quite expected. Failing to get the majority of early cases under treatment, I would advocate the treatment of practically all cases, it may not be with a view to cure alone, but with a view to educate the sufferers; to show them the best methods of taking care of their own health and of the health of the other members of their family. Not only can one educate consumptives, but at the same time the education is a means of prevention. This educational and preventive method can only be practised in a sanatorium, and this does more than assist the sufferer; "it brings home to the patients, to their friends, and to the public, the paramount importance of the early recognition and treatment of the disease."

"It must be conceded that the educational value of sanatoria, in one or other aspect, is very considerable in the direction of promoting the public health generally, *i.e.*, in so far as these institutions spread amongst the wage-earning classes the desire for a healthy life they must tend to influence the well-being of the people and thus promote health quite independently of their direct influence on tuberculosis."

The method of treating consumptives in the manner I have suggested has given good results in places where it has been tried, and I am sure, should your Authority consider it worthy of a trial, you would be amply repaid by the knowledge that the sufferers would be better tended than they possibly could be in their own small homes, that their families would be freed for some time from living in an atmosphere loaded with infectious tubercle bacilli, and that foci of danger would be removed from many parts of your district for well-known periods.

The question of cost has to be considered, and there again it is very difficult to make out a balance-sheet, because, on the one side you have the absolute cost of the sanatorium, and on the other you have the problematical cost which would have likely been incurred by the poor law authority had these patients been at home, plus the problematical saving by the lessened chance of spreading infection to those now healthy. If this idea be adopted, I have every confidence that the sanatorium will be the better method, and that the balance in favour will be on the sanatorium page.

DEATHS FROM RESPIRATORY DISEASES OTHER THAN PHTHISIS.

The deaths from these diseases (chiefly Bronchitis and Pneumonia) number 198, as compared with 162 last year, and

241 during the previous year. This gives a death-rate of 2·64 per 1000, as compared with a rate of 2·28 per 1000 last year, and with 3·49 per 1000 for the previous year. The rate for the Administrative County is 3·09 per 1000.

The cold, wet year quite readily explains the increase of the deaths from the chief respiratory diseases.

UNCERTIFIED DEATHS.

This year I have included amongst these deaths all deaths not certified by a registered medical practitioner or not certified by a coroner's inquest. In previous years I excluded deaths which had been placed before the coroner and in which he had decided not to hold an inquest. Consequently there appears a great increase this year in uncertified deaths when compared with previous years, but it is apparent, not real.

The number of such deaths is 37, or 3·08 per cent. of all deaths. The percentage of uncertified deaths for England and Wales is 1·4.

INFECTIOUS DISEASES.

There is very little difference between the number of infectious diseases notified this year and the number notified last year, viz., 498, as compared with 484. The number notified during 1905 was 655.

There have not been any Smallpox cases or any cases of either Spotted Fever or Typhus.

Spotted Fever has appeared in the neighbourhood of your district, and several suspicious cases have been observed within your area, but in the few cases where the spinal fluid was examined the results were negative. There was a smart outbreak of Typhus in the borough of Gateshead, but happily the disease did not spread to any of the surrounding districts:

Unhappily Diphtheria and Scarlet Fever have increased in numbers, but there has not been an increase in deaths from either disease. There has been a marked decrease in the number of cases of Enteric Fever, the number this year being 23, as compared with 65 last year.

Of the total 498 cases, 264, or 53·0 per cent., are Scarlet Fever, as compared with 46·0 per cent. last year; 23, or 4·6 per cent., are Enteric Fever, as compared with 13·4 per cent. last year; 4, or 0·8 per cent., are Puerperal Fever, as compared with 0·41 per cent. last year; 128, or 25·7 per cent., are Diphtheria, as compared with 23·1 per cent. last year, and 79, or 15·8 per cent. are Erysipelas, as compared with 17·2 per cent. last year.

The following table give the statistics for each quarter of this year, and the number of notifications, with the attack-rate per 1000 of the population, since 1890 :—

First Quarter	.....	90	Cases.
Second	„	102	„
Third	„	106	„
Fourth	„	200	„
1890	.....	403	..... 9·61
1891	.....	412	..... 8·15
1892	.....	574	..... 11·14
1893	.....	842	..... 16·15
1894	.....	538	..... 10·14
1895	.....	711	..... 12·75
1896	.....	819	..... 14·26
1897	.....	378	..... 6·63
1898	.....	403	..... 6·87
1899	.....	485	..... 8·13
1900	.....	683	..... 11·27
1901	.....	822	..... 13·51
1902	.....	818	..... 12·95
1903	.....	1211	..... 18·78
1904	.....	789	..... 11·85
1905	.....	655	..... 9·49
1906	.....	484	..... 6·82
1907	.....	498	..... 6·82

Though there has been a slight increase in the total number of cases, the attack-rate per 1000 is the same as last year.

In all possible cases the house has been visited, and instructions respecting the prevention of the disease spreading have been given to the parents, but time has only allowed me to visit a part of the cases notified.

The following table gives the attack-rate per 1000 of the population of the different infectious diseases for your district and for the Administrative County. For the district the attack-rate is 6·82 per 1000, and for the County the rate is 5·46 per 1000.

	CHESTER- LE-STREET.	ADMINISTRATIVE COUNTY.
Smallpox	0·00	0·002
Scarlet Fever	3·61	2·68
Diphtheria and Membranous		
Croup	1·75	1·33
Enteric Fever	0·31	0·58
Relapsing Fever	0·00	0·00
Cholera	0·00	0·00
Erysipelas	1·08	0·83
Puerperal Fever	0·05	0·03

SMALLPOX.

The district has been entirely free from Smallpox during the year.

SCARLET FEVER.

The incidence of Scarlet Fever declined during the first three quarters of the year, but during the fourth quarter a considerable number of cases appeared at Usworth Colliery, Waterloo, and at New Washington. The disease appeared to spread by the contact of children at their homes, and certainly school life was not a factor in the spreading of the disease. Usworth Colliery has been very free from the disease for quite 10 years, and consequently there was a considerable number of susceptible children, and in many families several children were affected. The whole of the cases were of a very mild character, and this applies to practically every case during the year. The number of cases during the year is 264, as compared with 223 last year, and 383 during the previous year, an increase of 41 cases for the year. The attack-rate is 3·61 per 1000, as compared with 3·14 per 1000 last year, and 5·55 per 1000 for the previous year. The attack-rate for the Administrative County is 2·68 per 1000.

As I have already said, the deaths have been remarkably few, only 2, equalling a case-mortality of 0·75 per cent., as compared with a case-mortality of 1·79 per cent. last year.

The following table gives the number of cases and the attack-rate for your district since 1890, and the second table compares your attack-rate with that of the Administrative County since 1894 inclusive :—

YEAR.	NO. OF CASES NOTIFIED.		ATTACK RATE PER 1000.
1890	284	..... 5·73
1891	267	..... 5·28
1892	404	..... 7·81
1893	331	..... 6·31
1894	304	..... 5·72
1895	495	..... 8·90
1896	553	..... 9·75
1897	217	..... 3·80
1898	273	..... 4·65
1899	333	..... 5·40
1900	527	..... 8·69
1901	631	..... 10·37
1902	554	..... 8·87
1903	872	..... 13·52
1904	458	..... 6·88
1905	383	..... 5·55
1906	223	..... 3·14
1907	264	..... 3·61

The following table gives the respective rates for the County and your district since 1894 :—

YEAR.		DISTRICT.		COUNTY PER 1000.
1894	.....	5·72	.....	5·54
1895	.....	8·90	.....	6·62
1896	.....	9·75	.....	5·88
1897	.....	3·80	.....	3·45
1898	.....	4·65	.....	4·11
1899	.....	5·40	.....	6·17
1900	.....	8·69	.....	7·47
1901	.....	10·37	.....	7·97
1902	.....	8·87	.....	7·08
1903	.....	13·52	.....	6·90
1904	.....	6·88	.....	5·74
1905	.....	5·55	.....	4·24
1906	.....	3·14	.....	3·18
1907	.....	3·61	.....	2·68

MEASLES.

A very general outbreak of Measles has toured your district during the year, and a very large number of children must have been attacked. The death-rate has, however, not been great. The number of deaths has been 45, as compared with 9 deaths last year, and 46 deaths during the previous year. The death-rate is 0·62 per 1000, as compared with a death-rate of 0·12 last year, and with a rate of 0·66 during the previous year.

The method adopted to control the disease, and at the same time to interfere as little as possible with school work, was to close every infant school as soon as I was aware of Measles in that school, and at the same time to endeavour to get those in the mixed schools to attend, provided the child had previously had Measles, whether from a Measles infected house or not.*

This has been my practice for years, and, though I still have opposition from parents, and even from medical men, I find that the opposition is decreasing. In some districts there is very

* Since this was written, the L.G.B. have issued more precise instructions regarding the exclusion from school of particular children, in order to prevent the spread of disease, in the appendix of which is the following paragraph :—

“ Children coming from houses in which either measles, mumps, chicken-pox, or whooping-cough exists must be dealt with as follows :—

“ (a) Children in schools, other than infants’ schools, who have not had the disease and all children in infants’ schools must be excluded.

“ (b) Children in schools, other than infants’ schools, who have had the disease need not be excluded.”

little, in others very much, some attendance officers being more able than others to persuade parents to follow the advice given them.

The following schools were closed, each for the time specified, on account of Measles. In schools where a separate Infants' department does not exist, it appears that for school work the whole school must be closed, and unless specified the whole school had perforce to be closed :—

Kibblesworth from the 4th February to the 4th March.

Kibblesworth from the 9th March to the 10th April.

Waldrige from the 24th May to the 23rd June.

Birtley (Infants') from the 4th June to the 3rd July.

Pelton Fell (Infants') from the 12th June to the 11th July.

Birtley Infants' Catholic from the 28th June to the 27th July.

Birtley Infants' Protestant from the 28th June to the 27th July.

Waldrige Infants' from the 28th June to the 27th July.

Sacriston Infants', 3 departments, from the 1st July to the 31st July.

Chester-le-Street Infants' (Back Chare) from the 1st July to the 31st July.

Fatfield from the 6th July to the 5th August.

Witton Gilbert (Infants') from the 30th August to the 29th September.

Harlow Green from the 30th August to the 29th September.

St. Aidan's (Infants') from the 11th September to the 10th October.

Pelton (Infants') from the 14th September to the 13th October.

Usworth Colliery (Infants') from the 20th September to the 19th October.

Lamesley (Infants') from the 26th September to the 25th October.

Chester-le-Street (Infants'), Burns, from the 1st October to the 31st October.

Springwell (Infants') from the 1st October to the 31st October.

Eighton Banks from the 25th October to the 24th November.

New Lambton (Infants') from the 1st November to the 30th November.

Nettlesworth (Infants') from the 4th November to the 3rd December.

West Pelton (Infants') from the 13th November to the 12th December.

Lumley (Infants') from the 13th November to the 12th December.

ENTERIC FEVER.

There has been a marked decline in the incidence of Enteric Fever. The number of cases notified is 23, as compared with 65 last year, and 78 during the previous year. The climatic

conditions were very favourable to a low attack-rate for this disease.

The attack-rate per 1000 is only 0·31, as compared with 0·91 last year, and with an attack-rate of 1·13 during the previous year. The rate for the Administrative County is 0·58 per 1000.

The number of deaths is 2, as compared with 6 last year, and the case-mortality is 8·69 per cent., as compared with 9·07 per cent. last year, and with 12·82 per cent. during the previous year.

The number of cases and the attack-rate per 1000 are the smallest on record since 1890, the first year of compulsory notification.

The following table gives the number of cases, and the attack-rate per 1000, for each year since the adoption of the Notification Act :—

YEAR.	NO. OF NOTIFICATIONS.		ATTACK RATE PER 1000.
1890	53	..... 1·26
1891	71	..... 1·40
1892	69	..... 1·34
1893	353	..... 6·77
1894	111	..... 2·09
1895	72	..... 1·30
1896	108	..... 1·88
1897	33	..... 0·57
1898	39	..... 0·66
1899	57	..... 0·95
1900	57	..... 0·94
1901	71	..... 1·16
1902	67	..... 1·07
1903	32	..... 0·49
1904	48	..... 0·71
1905	78	..... 1·13
1906	65	..... 0·91
1907	23	..... 0·31

In Table IX will be seen the distribution of the disease so far as townships and months of the year are concerned. The causes, so far as could be ascertained, the condition of the surroundings, water supply, and method of excrement disposal, will be seen on consulting Table XV.

The probable cause of each case has been investigated, and all appeared to be sporadic. Neither any water supply nor any milk supply was the cause of any case. These so-called sporadic cases are caused by typhoid germs being present in localities, and accidentally ingested by the sufferers.

It has been proved that certain individuals are capable of carrying in their intestinal canal the germs of Typhoid Fever, and, though not themselves suffering from any ill effects of the presence of these germs, are capable of indirectly infecting others, and this fact will explain in many instances an isolated outbreak of Enteric Fever, where otherwise the cause is a mystery.

DIPHTHERIA AND MEMBRANOUS CROUP.

This disease does not show any signs of lessening in frequency, in fact there is an increase during the year of 16 cases. The number of cases notified during the year has been 128, as compared with 112 last year, and 80 during the previous year. The attack-rate is 1·75 per 1000, as compared with 1·58 per 1000 last year, and 1·15 per 1000 during the previous year. The attack-rate for the Administrative County is 1·38 per 1000.

The following table gives the number of cases, and the attack-rate per 1000, for each year since the adoption of the Notification Act :—

YEAR.	NO. OF NOTIFICATIONS.		ATTACK RATE PER 1000.
1890	6	..... 0·11
1891	15	..... 0·30
1892	27	..... 0·52
1893	29	..... 0·55
1894	15	..... 0·28
1895*	16*	..... ..
1896	57	..... 1·00
1897	21	..... 0·36
1898	16	..... 0·27
1899	10	..... 0·16
1900	17	..... 0·28
1901	33	..... 0·54
1902	64	..... 1·02
1903	128	..... 1·98
1904	130	..... 1·95
1905	80	..... 1·15
1906	112	..... 1·58
1907	128	..... 1·75

From 1890 to 1899 the incidence of Diphtheria was limited, and showed no tendency to increase, but in 1900 there was a decided increase of the number of cases, and much more so in 1901, being exactly doubled in that year. Since then the number has varied somewhat, but there has been no decrease.

The increase of Diphtheria is not confined to your district, it is not even confined to the Administrative County, but is general over the whole of England and Wales.

* Figures incomplete (for six months only).

It is more than probable that the school is the most common focus of infection. Many cases are mild, and the clinical symptoms are so uncertain that, unless a bacteriological examination of the throat secretions is made, it may be quite impossible to distinguish a particular case from a non-infectious sore throat. There is so great a demand made by education authorities for infants to attend school, in order to earn a high grant, and of masters to earn *kudos*, and, it may be, a monthly half-holiday, that many children are at school who would be better at home, not only for themselves, but for their fellows.

In this way, doubtless, there are mild cases attending school in an infectious state, and the close contact with a susceptible child causes another case, this time a fatal one probably.

Last year I pointed out that the age-period of Diphtheria is that of tender years. Of the 128 cases this year, 112, or 87·56 per cent., occurred under 15 years of age, as compared with 92·87 per cent. last year, and 71 cases, or 63·39 per cent., occurred between the ages of 5 and 15 years, as compared with 67·5 per cent. last year, whilst 41 cases, or 32·0 per cent., occurred under 5 years of age.

Besides the 128 cases of Diphtheria notified, there have occurred in young children under 5 years of age 13 deaths from Acute Laryngitis, and it is probable that some of these cases might have been Diphtheria, and died unrecognized as such.

The case-mortality is 14·84 per cent., as compared with 25·89 per cent. last year, and 12·5 per cent. during the previous year. This is at least satisfactory. It may be due to the milder nature of the disease, or probably the increased use of antidiphtheritic serum may be a factor in the reduction of the death-rate. During 1906 I dispensed 120,000 units of serum to 7 medical practitioners, and in 1907 470,000 units of serum to 19 medical men. There has thus been a very considerable increase of the use of serum, and as this treatment is, without the very least doubt, the only treatment from which cure can be anticipated, it is to be fervently hoped that doctors will continue to use it, to use it freely, and at the very earliest possible moment after the diagnosis has been made. This early use is the crux of the whole good of serum, and I am afraid this is not quite recognized by some men yet, for I have over and over again a request for serum sent me on the notification form. The delay in the application of the serum thus caused is wasteful, injurious to the reputation of the remedy, and jeopardizes the life of the patient. Every man requiring serum should apply by special messenger, or by wire, and, if that is done, they will be in the possession of the remedy within an hour or two. Your

Council lately circularized practitioners respecting the advisability of using serum, and this circular has had the effect of interesting many practitioners in its use. The circular, *inter alia*, pointed out the necessity of early use of the serum, and the experience of men of repute, men who have used serum in thousands of cases, emphasizes the absolute necessity of using serum early, since every hour's delay adds to the danger of the disease, and to the decreasing potency of the remedy.

The following table shows the number of cases notified, the number of deaths, and the percentage of deaths to notifications, during each quarter of the year :—

First Quarter..	29 cases notified	..	7 deaths or	24·13 per cent.
Second	„ .. 25	„ .. 5	„	25·00 „
Third	„ .. 37	„ .. 3	„	8·10 „
Fourth	„ .. 37	„ .. 4	„	10·81 „

The case-mortality during the first two quarters was equally high as that of last year, whilst during the latter half of the year the case-mortality fell to nearly one-third of that of the first half of the year. During the second half of the year very much more serum was used, viz., 390,000 units by 15 practitioners on 32 occasions, and in the first half of the year 170,000 units by 7 practitioners on 17 occasions. The previous table shows that during the first half of the year there were 54 cases, and 74 cases during the second half-year. In other words, during the first half-year 31·5 per cent. of the cases had serum, and of all the cases notified 24·5 per cent. died ; during the second half of the year 43·2 per cent. of the cases had serum, and of the total cases notified 9·4 per cent. died. I do not suggest that the marked decline in the deaths was due entirely to serum treatment, because the type may have been milder, but these are the facts, and I think it quite reasonable if some of the decline is credited to a more extended use of serum. Get serum injected during the first or second day of the disease, and the death-rate will practically disappear.

PUERPERAL FEVER.

The number of deaths this year is 8, as compared with 3 last year, and with 5 during the previous year. The number of cases notified is 4, as compared with 2 last year, and with 3 during the previous year.

WHOOPING COUGH.

During the year there have been 4 deaths from Whooping Cough, as compared with 23 deaths last year, and with 43 during the previous year. Towards the end of the year Whooping Cough appeared to be increasing.

DIARRHŒA (ZYMOTIC ENTERITIS).

There was a very marked fall in the number of deaths from this disease as compared with last year, viz., 43, as against 101, and 92 during 1905.

The townships (excluding those under 1,000 population) having the highest death-rates are Lumley Great (1·98), Plawsworth (1·55), Burnmoor (1·40), and Pelton (1·05); and the lowest are Edmondsley (0·00), Harraton (0·00), Walldridge (0·00), and Witton Gilbert (0·15).

The low death-rate from Diarrhœa has been entirely due to the cold, wet summer and autumn. It is quite admitted that Diarrhœa never assumes epidemic magnitude until a mean temperature of the earth four feet from the surface has been reached of 55° F.

Diarrhœa is due to one or more organisms which find a congenial soil in the alimentary canal, and by their toxins produce violent purging and general poisoning of the body, which frequently causes death of the host, especially if the host is a young child. It is more than likely that the organic cause of Diarrhœa is ingested, either with food or by clinging to the mouth, is swallowed in the saliva or during the taking of food. Again, these organisms find the most congenial surroundings, and surroundings in which they can multiply most readily, in filthy soil, in densely crowded districts, whilst in open areas they live in difficulty, and increase slowly, and are probably less virulent than in places where their food is plentiful and to their liking.

The figures representing the difference in the fatality of Diarrhœa between dense areas and open areas proportionately corresponds this year to that of last year, which were fully given in my last annual report, and need not be repeated again.

The causes remain the same, yet the continued abolition of the open ashpit-privy, the better sewerage and draining of your district, which has been continually going on for years, must eventually improve the condition of the people, and tend to reduce Diarrhœa. All over the district the carelessness of many, the depositing of soap-suds, used tea leaves, on the streets, permitting children to defecate in the vicinity of many of the houses, tend in every way to keep the surroundings of those houses unhealthy, and dangerous to the children, especially during a warm year.

The common house-fly has over and over again been blamed as a carrier of infection, especially that of Enteric Fever and Diarrhœa. I am not sure that the fly has actually been found

guilty of these sins, but nevertheless the house-fly is a very objectionable visitor. It swarms over food, over the dirty floor, and over filth in all directions, and, *primâ facie*, there is certainly a reason to wage war against this pest.

It has now been definitely proved that the great and almost only breeding places of the house-fly are horse manure middens, spent hops, and ashpits containing fermenting substances. They do not breed in non-fermenting cow-manure heaps, in ash-bins, or in human excreta deposited in the streets or such places.

They also breed to some extent in hen pens and such like, in piggeries, and in collections of fermenting vegetable refuse.

The house-fly feeds chiefly on moist decaying vegetable matter, horse manure, spent hops, straw mattresses, flock beds, if rotting, and are especially partial to dirty bedding from rabbits, excreta from fowls, pigs and human beings.

It has been proved that the early life cycle of the house-fly is from 10 to 14 days, but in colder weather or places the cycle may be from three to five weeks or more. They breed much more profusely in hot seasons.

To reduce this pest as far as may be, cleanliness of the house surroundings should be enforced, children prevented from defecating near houses, all stable manure pits should be emptied every week, from May to October inclusive. This is a most important thing to attend to. By cleansing every week, the hatching of eggs is destroyed to a great extent. In emptying these pits it is necessary to empty completely, to brush out very carefully, and to treat the walls and floors with boiling water, or with any strong disinfectant, as chlorinated lime. Ashpits should also be emptied frequently.

The cleansing of the hutches of pet animals, such as rabbits and guinea pigs, should be carefully attended to, and the cleanings buried.

These are a few hints on the prevention of the house-fly pest and danger, and I think your Council should issue instructions that horse-manure pits in the neighbourhood of dwelling-houses must be cleaned out every week during the months I have named. This work could not be said to be in any way a hardship on the tenant, and would be a blessing to the community at large, if such a process reduced appreciably the number of house-flies during a hot year, even if they are not guilty of spreading disease.

DISINFECTION OF HOUSES, ARTICLES OF CLOTHING, &c.

There has not been any systematic disinfection of houses or articles of clothing attempted during the year. A few houses have been disinfected, as well as a few parcels of clothing.

Your Council have now resolved to commence the disinfection of houses and of articles of clothing systematically, at first devoting your attention to houses wherein have been Diphtheria, Enteric Fever, and Phthisis, and, to some extent, Scarlet Fever. I mention only the diseases which are with us always. For this purpose your Council will provide machinery at an early date, and I trust to be able to say in next annual report that good work has been accomplished during the year.

SCHOOLS.

There has not been any disinfection of schools undertaken during the year, and I have again to reiterate my remarks on this point which were made in my last year's report. As already mentioned, a large number of the infants' schools have been closed, on account of the prevalence of Measles, during the year.

A number of the older schools could be improved, and especially the playgrounds, whilst in some the old ashpit-privy still exists. Water-closets, instead of ashpit-privies, have been substituted at the schools of Witton Gilbert, Edmondsley, and Plawsworth.

To abate the overcrowding in the schools, the County Council are building or have opened temporary schools at Birtley, Washington Station, Harlow Green, Pelton, and Chester-le-Street, but others are certainly required. The design of the schools now building is much better than those of the central corridor plan which have recently been erected.

In respect to infectious diseases, in as many cases as could be visited the school authorities were notified of the case, and a time specified during which all children from the infected houses were to be excluded. In no case could any outbreak of infectious disease be traced to school life, though I consider that schools are the chief foci of Diphtheria, Ringworm, and other infectious skin diseases.

WATER SUPPLY.

The district is well supplied with plenty of wholesome water, and whilst a few isolated houses are still unsupplied, these are becoming fewer year by year. The great expense attaching to the supply, where it is necessary to lay a long main, of water to isolated houses is the only obstacle in the way of an already

completed supply. Attention is being paid to the few remaining instances where a public supply is better than their present supply from wells. The dairy farms of High, Middle, and Low Barmston are not provided with water from any company's mains, but only from local, shallow wells, which may be polluted at any moment. At two of these farms, Enteric Fever has occurred, on two different occasions at Low Barmston, and once (two cases) at High Barmston. In these cases your Council should insist on an early supply from the same source as the general supply is got from.

In some parts of your district, Birtley, Team Colliery, and Washington especially, the water in the majority of cases is from outside taps. This is very objectionable. There is a tendency to use a modified quantity, owing to the distance to carry it, and, having stored the water in the house, it is in danger of becoming contaminated with injurious substances floating and circulating in the atmosphere. In all these cases it would be to the hygienic advantage of the user, and to the pecuniary advantage of the supplier, and of the owner of the house, if the taps were inside the house. In many instances the ground in the vicinity of the water-tap stands in a puddle, is unseemly, and injurious.

The houses at Pennyfine, in the township of Lamesley, mentioned in my last year's report as having an inadequate supply, have not been provided. This is not, however, in any way due to neglect of your Council, but to a difficulty with the Consett Water Co., who say that, as these houses are without the area of their supply, they are unable to provide for them except through a meter. As the charge of water by meter may be more than 13s. per house per annum, the amount which can be reasonably charged, I understand the District Auditor threatens to surcharge the difference, hence the deadlock.

A few houses known as Storey's Buildings, and a dairy farm, Furnace Farm, near Chester-le-Street, get their water from a shallow well. The supply is inadequate at times, and it is readily polluted. I have brought the question before the Chester-le-Street Committee on several occasions, but nothing has been done to improve this state of affairs.

REMOVAL OF HOUSE REFUSE.

As a general rule this has been satisfactorily performed by the contractors during the year. There are, however, exceptions, *e.g.*, one of the divisions of Pelton Parish, and in the Washington district one contractor was dismissed owing to the imperfect way his work was accomplished.

Of the townships scavenged by the colliery owners, Walldridge, Pelton Fell, and Chester Moor have been done well. Ouston has been at times neglected.

Regarding the Washington-Birtley area, Mr. Harrison says : " On the whole I consider that this work has been better done lately, but constant supervision is necessary, and a considerable amount of time is taken up with the work." These remarks, so far as the words " constant supervision " to " with the work " apply, can be said in regard to the whole area. Constant supervision is generally required to keep the contractors up to the mark, and will be required so long as your Council contracts, the more especially if the " contracted for " area is a small one.

It is a large question, undoubtedly, the proposition that your Council should in all your populous areas undertake by your own staff your scavenging. I am not prepared to say it will cost less, most probably a little more, but you will have more control over the scavengers, and you will at the same time have the work better done. Would better scavenging repay greater cost ? That is a pertinent question to ask. I am quite certain that better scavenging will repay enhanced cost. This may be very difficult to demonstrate ; it would take years to show itself in the better condition of the people and the healthier state of the younger children, but experience tells everyone that the cleaner a house is, the healthier the inhabitants, and consequently the cleaner the surroundings of the house, of a necessity the healthier the people. If a person lives without perpetual annoyance from his surroundings, of a necessity he must live a more contented life, and, being free from constant worry, is obviously in a better condition to resist injurious agencies at work.

During the year the township of Edmondsley has been included amongst those townships where the scavenging is contracted for, and Chester Moor Colliery, about 170 houses, in the township of Chester-le-Street, formerly scavenged by the owners, is now scavenged by your Council's workmen.

The townships yet scavenged by the owners are :—Barmston, pop. 588 ; Biddick, South, pop. 42 ; Cocken, pop. 115 ; Ouston, pop. 1,037 ; Plawsworth, pop. 1,290 ; Walldridge, pop. 1,491 ; and a part of Chester-le-Street, viz., the colliery village of Pelton Fell, pop. 3,600. In other words, the scavenging of a population of 64,748 is contracted for or done by your Council's staff, and a population of 8,163 is done by the owners of the property. The very great part of that population live in houses belonging to Colliery owners, and the colliery company, as a rule, do the work by their own servants.

The following table gives an approximate cost of scavenging per house per annum. The year included is from 1st October, 1906, to 30th September, 1907 :—

TOWNSHIP.	GROSS COST PER ANNUM.			COST IN PENCE PER HOUSE PER ANNUM.	
	£	s.	d.		
Birtley	583	17	4	....	94.1
Burnmoor.....	101	6	0	....	82.8
Chester-le-Street	974	8	0	....	..
Edmondsley .....	.....			....	..
Harraton	261	4	8	....	107.3
Lambton	14	10	0	....	108.4
Lamesley	475	9	6	....	95.2
Lumley, Great	170	0	0	....	92.9
Lumley, Little	48	13	6	....	77.8
Pelton	680	12	4	....	103.1
Urpeth	294	0	6	....	103.5
Usworth	535	9	7	....	92.5
Washington	482	4	10	....	92.2
Witton Gilbert	526	10	11	....	98.5

The total paid for scavenging is £5,205 10s. 11d., as compared with £4,821 19s. 0½d. last year, and, roughly speaking, means that each house scavenged by contract costs the district for the year ending 30th September, 1907, 96.5 pence.

SANITARY IMPROVEMENTS ACCOMPLISHED DURING THE YEAR AND REQUIRED IN THE NEAR FUTURE.

A very large amount of work has been done during the year in inspection, abolishing insanitary ashpit-privies, improvements to houses, and other work, which will be detailed under the different townships.

Your Council expressed a desire to have a general sanitary survey made of your district, with especial reference to the state of each house as to its fitness for human habitation. The idea was to tabulate the details of the condition of each house in what might be called a "ledger," which would be corrected to date. This is a colossal work. It was late in the summer before a start was made, and really only a small amount was overtaken before the short winter days stopped the work. It can be done, but it is a question whether your sanitary staff can finish the survey during the coming year, but your Council can rest assured that a determined attempt will be made.

A very great number of nuisances of minor degree found existing have been dealt with without the necessity of your Council's intervention, but one nuisance requires to be dealt

with by your Council adopting bye-laws respecting "Tents, Vans, Sheds, and similar Structures." Vans inhabited chiefly by itinerant showmen, and vans which have a permanent "stance," generally cause a very great nuisance from the want of drainage facilities and from the want of privy accommodation. Happily, there are few places where vans collect, yet the Market Place in Chester-le-Street is a very prominent example. There may be a score of vans over a week-end here, or even longer. All their slops are carelessly thrown on the ground wherever they wish, their horses stand and feed and pollute the ground, and, as the owner of the ground is the chief offender, it is extremely difficult under present conditions to effect any improvement. The adoption of bye-laws ensuring the cleanliness of vans, the provision of water for the occupants, for keeping the ground in the vicinity of the van free from liquid or solid filth, the provision of privy accommodation, is very necessary, and I would urge your Council to consider at an early date the advisability of having such bye-laws.

BIRTLEY.

In the village of Birtley a considerable number (80) of ashpit-privies have been converted into ash-closets. These improvements have chiefly been in the following streets:—Warwick Square, Orchard Street, Jameson Street, St. Mary's Terrace, Thomas Street, Birtley Lane, Mount Pleasant, Durham Road, and Tuns Place. A number of yards have been cemented. Five houses at Crow Row are being raised so that the upper storey will be at least 8 feet high. These houses will be very much improved.

The Vale Pit houses have been properly drained.

There continues to be overcrowding in the township, and it is to be hoped that the large number of new houses which the Birtley Coal Co. are now building will do something to reduce that overcrowding.

BURNMOOR.

Nine ashpit-privies have been converted into ash-closets.

CHESTER-LE-STREET.

In Pelton Fell considerable improvements have taken place in the abolition of nearly 100 ashpit-privies and the erection in their stead of ash-closets. In the township during the year 112 ash-closets and 13 water-closets have replaced insanitary ashpit-privies, and 8 ash-boxes have replaced ashpits which were so situated as caused their contents to be a great nuisance during removal.

The absence of proper drainage to five houses in the Middle Chare, Chester-le-Street, was remedied by the enforcement of a Magistrates' Order to abate the nuisance caused by this failure to provide drains for each house.

Seventy-four backyards have been cemented and 49 new drains constructed during the year.

The houses at the Furnace still remain undrained, and I am sure that this is quite a necessary improvement, and should be undertaken at an early date.

In Pelton Fell are about 80 back-to-back houses. The owners have, however, agreed to convert them into through houses within a period of five years.

A considerable number of old yards in the town of Chester-le-Street require to be cemented, to provide dry areas in the vicinity of the houses, and a very considerable quantity of ashpit-privies require converting to ash-closets or water-closets, preferably the latter.

The streets have not been touched this year, and a considerable number should be properly made, under the provisions of the Private Streets Works Act. I understand that about 20 are now scheduled for making, and the work will be commenced as soon as the L.G.B. sanctions the loan for the purpose.

EDMONDSLEY.

In the village of Edmondsley 62 open ashpit-privies have been converted to ash-closets, 30 yards cemented, and 31 houses generally repaired.

HARRATON.

In this township is a large number of poor houses, old and of faulty construction, and the time has quite arrived when these old houses should either be raised and goodly-sized upper rooms provided, or else the houses should be disused. There are many insanitary ashpit-privies to be abolished. Nineteen ash-closets have been erected during the year to replace ashpit-privies.

Ten houses have been provided with a good water supply, and the supply of other 13 has been improved by the tap being placed inside the house.

LAMESLEY.

The village of Kibblesworth has been considerably improved. In my last year's report I mentioned the promise of the agent to build ash-closets and to alter and improve many of the houses

during a period named. This promise has been fully implemented. Ten of the houses have been altered and improved by making the upper storey of sufficient height, with a fireplace in the rooms, and with a larger window to each room. A good staircase has been put in, and the downstairs room floor cemented. The houses are thus greatly improved. The houses dealt with are in the Pit Rows. Other houses are being similarly dealt with.

In the township 69 ashpit-privies have been pulled down, and their place has been taken by 72 ash-closets and 2 water-closets. Many of these ash-closets have been built at Kibblesworth. Other places where they have been erected are Sunnyside, Old Ravensworth, Team Colliery, Favell's Cottages, and the Pasture Field.

Improvement in the sewerage of the part of Eighton Banks in the neighbourhood of the Barrington School is being effected.

The part of Eighton Banks near the Mount requires sewerage in the immediate future.

LUMLEY, GREAT.

The village of Lumley is an old one, and the majority of the houses are old and of faulty design, so far as modern ideas are concerned, though when built, over 100 years ago, were considered houses of very superior quality.

The place is sewered in a way, but the condition of the sewers is unknown, and the disposal of the sewage is quite unsatisfactory. Without doubt, at an early date, your Council should undertake the sewerage of the village and the treatment of the sewage, so that all the present nuisances from that source would be abolished.

During the year the sewer of the Wood Row, Sixth Pit (26 houses), has been re-laid, and also that of Paradise (10 houses), Lumley.

During the year eight of the old houses have been rebuilt, and it would be highly advisable and necessary that the owners of the colliery, whose men occupy these houses, should year by year rebuild a certain number of these houses. The village is situated in a fine position, on the top of a slight elevation, and, were the houses good, it would be an ideal place.

Drains have been laid or relaid to 41 houses.

LUMLEY, LITTLE.

At Brecon Hill, two old houses have been rebuilt. The sewer of the Short Row (6 houses) and of the High Row (20 houses), Sixth Pit, has been relaid.

OUSTON.

The old ashpit-privies should be at an early date replaced by more sanitary ash-closets. The same remarks apply to Ewehill.

The proper sewerage of the village, and the separate draining of each house, is at last being proceeded with.

PELTON.

Nothing has yet been done to improve the sewerage of Club Row and its vicinity. Many of the houses abutting the main road have no sewers or drains. The people use, in some instances, the road water gullies, but in most cases the slops are thrown on the road, and an unsightly nuisance results. The place should be sewered at once.

The sewerage of Perkinsville is now being carried out, and this work, when completed, nearly abolishes the last of the open sewers which were so common in the villages of your district ten years ago.

In many places in the township the old ashpit-privy is still to the fore, *e.g.*, at Munro's Buildings, Orchard Square, Pelton Fell, and other places.

Ash-closets have been built at Colville's Buildings, Pelton, and promises have been obtained for the work of conversion of the old structures at Orchard Square and Munro's Buildings at an early date.

URPETH.

Urpeth township is now nearly all sewered, but that part known as Urpeth Village still has open channels.

The ashpit-privies at Eden Rows (South and North) have been pulled down and ash-closets erected, and part of those at Eden Place have been similarly treated. Many more are required, especially at Eden Wood Row, a part of Quality Row, Palace Row, and Eden Terrace (South and North). In the township 59 ash-closets have been built during the year.

The insanitary houses (33) at Urpeth Square are now closed, and in their place have been erected up to the present nine houses.

The two insanitary houses at Moss Close Farm have been closed.

USWORTH.

At last, the back street of Douglas Terrace has been properly made, and it is to be hoped that in the future less may have to be said respecting the insanitary state of this street of houses

than has been necessary in the past. All the yards of this terrace have now been paved (asphalted), and this greatly improves the house surroundings.

The Private Streets Works Act is now in force respecting several of the new streets in that part of New Washington situated in the township of Usworth. It is a moot question whether it would not be advisable to apply the Act to the whole township. Private roads are invariably poor, and a bad road is injurious to those using it, especially to children, who delight in using the worst part of the road, irrespective of after consequences.

The Mount has now been sewerred and each house separately drained to the sewer. This practically completes the sewerred of Usworth township. Twelve years ago every place in this township save a score or two of houses at New Washington had open channels for sewage, and not a single drain.

There are many insanitary houses still in the township, though several have been closed.

At the Single Row, Usworth Colliery, the 7 houses remaining at the end of last year not improved have now been heightened and made good houses, with proper sash windows and fireplace in the upstairs room, which is reached by a good staircase.

The houses at the Long Row, The Mount, have been provided with washhouses, and the yards have been cemented.

Considerable improvements have been effected at Usworth Colliery.

A water tap has been placed inside each house at High Row, Middle Row, Single Row, and Quarry Row, and cement footpaths have been made at the back of Single Row and Quarry Row.

At the New Rows, also, many improvements have been carried out, such as repairs to roofs, spouts, cementing of floors, better staircases, and a cement footpath at the front of each row, and, further, many of the overcrowded houses here have now smaller families living in them.

At Springwell several improvements have been effected. West View (8 houses) has been sewerred, yards have been cemented, and defective drains have been relaid, chiefly at Fell Place and Hunter's Terrace.

During the year, in this township 47 ashpit-privies have been demolished, and have been replaced by 47 ash-closets and 2 water-closets.

WALDRIDGE.

I am unable to report much respecting this township except that the four houses at the Brickflats have been considerably repaired and improved.

Several houses in this township should be closed, and, to begin with, the houses at the "Dayhole" should be closed at once.

WASHINGTON.

A few houses of an insanitary type have been closed during the year.

Many improvements have been carried out here, and there remains plenty of scope for many more, especially in improving and in closing many of the numerous insanitary houses in this township.

The two cottages at Six Houses have been raised.

Washington Staiths and Riverside.—A water tap has been placed inside each house at Blast Row, Walker's Buildings, and River View. The same should be done in respect to all the property there.

The houses (4) at Woodside remain unaltered, and unless the work of reconstruction is proceeded with at an early date the houses should be closed as unfit for human habitation.

Blast Row.—The yards at Blast Row have now been cemented.

New York (5 houses).—These houses have now been properly sewered, and the sewage is being treated bacteriologically in a small installation near at hand. The ashpit-privies are still there, but I understand that the Colliery Co. will, as soon as possible, convert them into ash-closets.

At Havannah Terrace the large unsightly open ashpit-privies are being converted into ash-closets.

Many of the new streets at New Washington and Washington Station, being quite unmade, have been in a very bad state. Your Council have, however, adopted for the whole township the Private Streets Works Act, and one hopes that its provisions will be put into operation without any undue delay, so that before the next winter approaches the people will have properly-made dry streets to walk on, instead of the muddy pools at present.

During the year 23 ashpit-privies have been replaced by 28 ash-closets and 2 water-closets. These improvements have been carried out chiefly at Big House, Spout Lane, Speculation Place, and Shaftoe Terrace.

WITTON GILBERT.

During the year 64 ash-closets have been built in this township, chiefly by the Sacriston Coal Company, for their property in Sacriston, and by the owners of Bearpark Colliery, for their property at the Klink.

Thirteen houses, chiefly situated in the village of Witton Gilbert, have had a water supply from the Weardale and Consett Co.'s mains provided. Previously these houses got their water from shallow wells, which were continually liable to be polluted. Sixteen yards have been cemented, and several houses generally repaired.

In considering the improvements made in the sanitary conveniences alone, the best idea will be got if I say that during the year, in the whole district, 592 ash-closets and 30 water-closets have been built, and have replaced about the same number of insanitary and foul-smelling ashpit-privies, most of which were in a semi-ruinous condition.

DAIRIES AND COWSHEDS.

A few cowsheds have been improved, but plenty of improvements remain to be carried out.

Many cowsheds are far from clean, and it appears that most cow-keepers are deaf to all advice on this point. Filth and bad ventilation appear to be the chief end of the care of a cowshed owner, and he who suggests cleaning of the cows' bodies, washing of their udders, good ventilation, the use of water on the byre floor, is considered—well, it is difficult for me to define exactly the position he occupies in the mind of a cow-keeper, but I do know that my suggestions are never acted on, and that my advice to wash udders is ridiculed, and the advice is considered to be that of a madman: that following the advice of washing udders is not only to waste time, but to injure the cow. One cow-keeper, on my advising the washing of udders, told me that such would necessitate him rising an hour earlier in the morning, whilst another said, "I would require another man if I am to do all the washing you suggest." Just go into a byre, and watch the process of milking. A dirty udder is scrubbed with an equally dirty hand, the flank of the cow is covered with a huge mass of crusted manure, the tail continually swishing about is soaked in urine, and in these surroundings the milker sets to work. Her head is planted firmly in the animal's flank, the pail directly below, and all the time of milking the scrubblings from the flank drop into the milk. These are the usual process and conditions under which milk is produced.

COMMON LODGING HOUSES.

These houses have been regularly inspected during the year, by day and between 11 p.m. and midnight.

Improvements have been got in the house at Birtley, but the accommodation is not yet quite satisfactory, and unless the occupier complies with your requirements, it would be necessary to consider the advisability of cancelling the registration of the house.

SLAUGHTER-HOUSES.

The slaughter-houses remain in the same condition as formerly.

Your Council have now adopted bye-laws respecting them, and if these laws are properly administered there ought to be an improvement in the existing ones, and a considerable improvement in any which may be built in the future. All the slaughter-houses recently erected have been built without the least attempt being made to get efficiency or of any idea of health, either in construction or situation.

UNHEALTHY DWELLINGS.

During the year many poor houses have been dealt with, and improvements effected, whilst a number of the worst have been closed or rebuilt. Nearly all of these improvements have been accomplished by negotiations between your officers and the owners; only in one instance has your Council's time been occupied in these negotiations.

Respecting the negotiations mentioned in my last year's report with the collieries of Springwell, Usworth, and Washington, though the agreement was more or less repudiated by the collieries, Washington Colliery finished the 16 houses promised by them, and Usworth their 12 promised, but at Springwell none have been built as yet. Washington Colliery also commenced their second 16, which, I am informed, will be increased to 24, and Usworth either built or leased about 20 more houses close to their own 12. I have good authority for stating that Usworth Colliery will commence at an early date to build 12 more houses,* and that this number will be increased to over 40.

When more houses are built, I am hopeful that the old, badly-designed, and insanitary houses will be closed.

* These houses are commenced.

The following table gives approximately the number of houses built and the number closed in each township during the year, each tenement being designated a house :—

TOWNSHIP.	No. OF HOUSES BUILT.	No. OF HOUSES CLOSED.
Birtley	41	..
Burnmoor.....	1	11
Chester-le-Street	22	..
Edmondsley .....	..	1
Harraton	71	..
Lamesley	32	..
Lumley, Great	1	2
Lumley, Little	51	..
Plawsworth .....	..	4
Urpeth	10	33
Usworth	75	21
Washington	75	12
Witton Gilbert	49	..
	428	84

As I have already said, many improvements of houses are still required. In most cases the houses should be rebuilt or closed. The chief places in your district where this action should be taken at an early date are the Old Row, The Square, and Old Hall, Usworth Colliery ; Old Row and Engine Square, Washington ; many houses at Eighton Banks, Fatfield, Nova Scotia, and Lumley. It would be creditable to the owners and of immense advantage to the occupiers if a systematic regeneration of these houses would be undertaken by the owners, and prosecuted with reasonable speed to a completion. Several years would elapse before a finish, but what can be accomplished at one place cannot be impossible at another.

Many of the houses which are now being built could have been better designed. Cases where three bedrooms are crushed into the space of two makes a house uncomfortable : there is hardly room to place a bed in a proper position. It is either parallel and close to the window, or else within a few inches of the fireplace. The third bedroom is a mere box room, without a fireplace, and in most cases with the very minimum of a ventilating opening above the door. It always appears to me that, whilst your Committee may not have any power to enforce a minimum floor space, their powers of persuasion to provide a better arrangement might be successful in many instances. In all the cases where three bedrooms are provided over two downstairs, the house is spoilt, but would have been a good house if the space over the kitchen and pantry had been occupied by

two bedrooms. Here the rooms would have been much larger, with a fireplace in each, with room to move about, and to move the furniture for the purpose of cleaning, which cannot be properly, or even at all, done in the three small boxes, designated bedrooms, which one finds in many of the houses being erected to-day.

THE HOSPITAL.

The hospital, which was erected in 1893 of wood framing and corrugated iron coverings, has been disused since the beginning of November, and the new pavilions occupied.

The old place, though badly constructed, did good service, and treated over 1,100 patients with satisfactory results. Without doubt, the new hospital is a great advance on the comforts of the old one, and one trusts that the results in the new wards will equal or be better than those of the old.

During the year 43 patients were admitted. Of these, 27 were admitted as suffering from Scarlet Fever, 8 as suffering from Enteric Fever, and 8 as suffering from Diphtheria. Respecting the Scarlet Fever and Diphtheria patients, the diagnosis in all cases was found correct, but in 3 case of Enteric Fever one patient was found to be suffering from some mild pyrexial disease, and was able to be discharged in a few days; another, from Tubercular Meningitis, and the third from an uncertain form of Dermatitis.

Of all the cases notified, 10·2 per cent. of the Scarlet Fever, 34·8 per cent. of the Enteric Fever, and 6·2 per cent. of the Diphtheria cases were admitted. Of all diseases notified only 8·6 per cent. were admitted, as compared with 12·5 per cent. last year.

For patients who recovered, the average number of days resident in hospital were 52 days for Scarlet Fever, as compared with 55 last year; 74 days for Enterics, as compared with 83 last year; and 36 days for Diphtherias, as compared with 27 days last year.

The average number of patients daily resident for the year has been 5·70, as compared with 6·76 last year.

AVERAGE NO. OF PATIENTS DAILY RESIDENT.

First Quarter	.....	5·73
Second	„	3·48
Third	„	7·43
Fourth	„	6·16

During the year one patient died from Scarlet Fever, being a case-mortality of 3·70 per cent. of admissions, and one died from Diphtheria, being a case-mortality of 12·5 per cent. of admissions.

The case-mortality of all admissions for the year has been 4·65 per cent., as compared with 3·92 per cent. last year.

The following table gives the number of cases admitted to the hospital since July, 1895, and the number of deaths :—

YEAR.	No. OF PATIENTS		PERCENTAGE OF	
	ADMITTED.	NO. OF DEATHS.	DEATHS TO	ADMISSIONS.
1895	.... 37	.... 0	....	0·00
1896	.... 121	.... 3	....	2·48
1897	.... 53	.... 2	....	3·77
1898	.... 104	.... 3	....	2·88
1899	.... 136	.... 10	....	7·35
1900	.... 116	.... 4	....	3·44
1901	.... 115	.... 8	....	6·97
1902	.... 104	.... 8	....	7·69
1903	.... 133	.... 6	....	4·51
1904	.... 56	.... 2	....	3·57
1905	.... 1	.... 0	....	0·00
1906	.... 53	.... 2	....	3·92
1907	.... 43	.... 2	....	4·65
	1076	50	....	4·66

During the year 22 patients recovered from Scarlet Fever, 7 recovered from Enteric Fever, and 11 recovered from Diphtheria, were discharged. On the last day of the year there remained in the hospital 2 cases of Diphtheria, 2 cases of supposed Enteric Fever, and 4 cases of Scarlet Fever.

FACTORY AND WORKSHOPS ACT, 1901.

All the larger workshops and factories have been inspected and found to be in a sanitary condition. No defects were found calling for any special comment.

There are no workshops of any size in the district.

<p>II.</p> <p>the District receiving m persons from District.</p>	<p>III.</p> <p>Other Institutions, the deaths in which have been distributed among the several localities in the District.</p>
<p>Asylum, Sedgfield.</p>	<p>The Union Workhouse, Chester-le- Street.</p>
<p>Durham.</p>	<p>The Isolation Hospital, Chester-le- Street.</p>
<p>Children, on-Tyne.</p>	<p>Dame Margaret's Home, Washington.</p>

se is within the District.

CHESTER-LE-STREET

For Wharfedale

YEAR.	Population estimated to Middle of each Year.	BIRTHS.		DEATHS UNDER ONE YEAR OF AGE.	
		Number.	Rate.*	Number.	Rate per 1,000 Births registered.
1	2	3	4	5	6
1897.....	57,024	2,155	37·80	318	147·5
1898.....	58,609	2,273	38·78	352	198·8
1899.....	59,584	2,283	38·31	386	169·0
1900.....	60,594	2,361	38·96	467	197·7
1901.....	60,833	2,380	39·12	422	177·3
1902.....	62,392	2,407	38·57	331	137·5
1903.....	64,462	2,473	38·36	432	174·6
1904.....	66,566	2,588	38·87	496	191·6
1905.....	68,985	2,602	37·71	467	179·4
1906.....	70,884	2,589	36·52	422	163·0
Averages for years 1897-1906	.....	2,411	38·30	409	173·6
1907.....	72,911	2,534	34·75	376	148·3

* Rates calculated per 1,000

Area of District in acres
(exclusive of area
covered by water). } 34,930

RURAL DISTRICT.

istrict.

T ALL OTAL.	DEATHS IN PUBLIC INSTITU- TIONS.	Deaths of Non- residents registered in District.	Deaths of Residents registered beyond District.	DEATHS AT ALL AGES. NETT.	
Rate.*				Number.	Rate.*
8	9	10	11	12	13
16·33	26	2	12	941	16·50
18·29	30	3	7	1,076	18·35
18·54	31	9	13	1,109	18·61
20·11	36	5	13	1,228	20·26
19·18	42	6	11	1,172	19·26
17·05	38	....	15	1,079	17·29
18·56	43	7	13	1,213	18·81
18·43	32	5	10	1,232	18·50
17·62	25	3	8	1,221	17·69
16·49	37	7	14	1,176	16·59
18·06	34	5	11	1,144	18·18
16·31	40	....	10	1,199	16·44

uated population.

Population at all ages, 60,542

of inhabited houses, 12,009

number of persons per house, 5·04

At Census of
1901.

<p>I.</p> <p>Institutions within the District receiving sick and infirm persons from outside the District.</p>	<p>Institutions S-a</p>
	<p>County</p> <p>County</p> <p>Hospitals Gle</p>

The Union

TABLE II.
CHESTER-LE-STREET RURAL DISTRICT.

YEAR	BARMSTON.				BIDDICK, SOUTH.				BIRTLEY.				BURNMOOR.				CHESTER-LE-STREET.				COCKEN.				EDMONDSLEY.				HARRATON.				LAMBTON.				LAMESLEY.			
	Population esti- mated to middle of each Year.	Births registered.	Deaths at all Ages.	Deaths under 1 year.	Population esti- mated to middle of each Year.	Births registered.	Deaths at all Ages.	Deaths under 1 year.	Population esti- mated to middle of each Year.	Births registered.	Deaths at all Ages.	Deaths under 1 year.	Population esti- mated to middle of each Year.	Births registered.	Deaths at all Ages.	Deaths under 1 year.	Population esti- mated to middle of each Year.	Births registered.	Deaths at all Ages.	Deaths under 1 year.	Population esti- mated to middle of each Year.	Births registered.	Deaths at all Ages.	Deaths under 1 year.	Population esti- mated to middle of each Year.	Births registered.	Deaths at all Ages.	Deaths under 1 year.	Population esti- mated to middle of each Year.	Births registered.	Deaths at all Ages.	Deaths under 1 year.	Population esti- mated to middle of each Year.	Births registered.	Deaths at all Ages.	Deaths under 1 year.				
	a.	b.	c.	d.	a.	b.	c.	d.	a.	b.	c.	d.	a.	b.	c.	d.	a.	b.	c.	d.	a.	b.	c.	d.	a.	b.	c.	d.	a.	b.	c.	d.	a.	b.	c.	d.				
1897	554	16	9	2	53	..	1	..	4994	201	82	32	1367	46	26	4	11583	413	193	72	85	2	2	..	2186	108	33	9	2551	97	36	12	164	4	5124	176	78	35
1898	585	19	10	2	58	2	5115	196	106	43	1415	53	25	8	12105	476	186	87	94	4	4	1	2581	111	37	15	2458	74	41	12	177	2	5124	179	81	31
1899	585	22	5	2	58	1	1	..	5292	217	117	43	1395	58	22	6	12250	421	184	64	104	4	3	..	2643	114	44	18	2477	97	48	14	177	4	5124	178	91	30
1900	585	14	12	4	58	..	1	..	5479	210	106	48	1381	42	26	6	12346	469	243	91	104	4	3	2	2643	128	50	18	2477	97	35	11	165	1	5124	205	105	39
1901	588	18	11	5	38	1	5373	204	99	37	1449	58	25	10	11753	443	230	86	100	3	6	..	2524	109	57	23	2788	83	45	10	151	6	3	1	5341	183	96	38
1902	588	21	19	8	42	1	5580	218	97	27	1449	41	24	7	12119	462	199	56	115	5	2524	113	50	18	2793	90	42	12	151	2	3	..	5356	193	83	28
1903	588	23	15	5	42	1	5917	240	138	51	1449	52	27	12	12693	446	225	70	115	3	1	1	2534	107	47	25	2803	87	37	9	151	2	2	1	5485	180	111	31
1904	588	25	19	11	42	1	6548	258	146	52	1449	41	22	6	12884	497	218	82	115	3	1	1	2534	109	49	27	2844	90	48	18	151	4	2	1	5556	183	89	34
1905	588	28	9	4	42	2	7063	280	122	53	1449	45	18	6	13330	487	265	95	115	3	2	1	2480	112	48	25	2849	83	42	14	151	3	4	1	5601	176	79	26
1906	588	23	7	2	42	2	7271	257	111	37	1449	34	15	5	13528	485	236	83	115	6	3	1	2354	85	38	17	2869	100	42	11	151	5	2	..	5705	197	80	24
Averages of years 1897-1906	21	11	4	1	228	112	42	47	23	7	460	218	78	4	2	109	45	19	90	41	12	3	1	185	89	31
1907	588	23	10	2	42	7410	302	142	48	1419	40	17	4	13875	409	226	62	115	5	2	2	2379	89	42	15	3002	81	45	11	151	5	2	2	5954	158	88	20

TABLE XV.
CASES OF ENTERIC FEVER, 1907.

No.	Date of Notification.	Name.	Age.	Sex.	Locality.	Probable Cause.	Probable connection between one case and any other.	Probable connection between the cause of one case and any other.	Water Supply Source.	Drainage.	Method of Excrement Disposal.	Manner in which Scavenging is performed.	Remarks.	Termination.	No.
1	16th Jan.	M. L.	42	F.	Pelton										
2	17th ..	T. L.	23	M.	New Lambton	Unascertainable.	None	None	Upland	None	Ashpit-privy	Fair	Probably Puerperal	Fatal	1
3	15th Feb.	M. W.	21	F.	Grange Villa	"	"	"	Deep Well	Sewer	"	"		Recovery ..	2
4	21st ..	E. P.	2	F.	Birtley	"	"	"	Upland	"	"	"		"	3
5	11th Mar.	J. T.	46	M.	Chester-le-Street	"	"	"	"	"	Ash-closet	Good		"	4
6	13th ..	M. S.	16	F.	No Place	"	"	"	"	"	"	"	Ultimately admitted to Workhouse, and diagnosed as Pneumonia	"	5
7	16th April	J. W.	31	M.	Witton Gilbert	"	"	"	"	"	"	"		"	6
8	2nd May	A. G.	8	M.	No Place	"	"	"	"	Imperfect	Ashpit-privy	"		"	7
9	13th ..	M. S.	27	F.	Blackhouse	"	"	"	"	Sewer	"	"		"	8
10	20th ..	A. B.	14	F.	Sacriston	"	"	"	"	"	"	"		"	9
11	5th June	A. M.	23	F.	Washington Station	"	"	"	"	"	"	"		"	10
12	20th ..	M. B.	42	F.	Sacriston	Previous case in house	No. 10	"	Deep Well	"	"	"		"	11
13	" ..	J. B.	16	M.	"	"	10	"	Upland	"	"	"		"	12
14	23rd ..	J. A.	9	M.	Birtley	Unascertainable.	None	"	"	"	"	"		"	13
15	9th Sept.	J. A.	8	F.	Washington Station	"	"	"	Deep Well	"	Ash-closet	"		"	14
16	14th ..	J. G.	22	M.	Birtley	"	"	"	Upland	"	W. C.	"		Fatal	16
17	6th Nov.	J. T.	70	M.	Beamish	"	"	"	"	"	Ashpit-privy	"	Not a case of Enteric	Recovery ..	17
18	15th ..	R. T.	29	M.	Grange Villa	"	"	"	"	"	Ash-closet	"		"	18
19	22nd ..	W. W.	15	M.	Washington Station	"	"	"	Deep Well	"	"	"		"	19
20	26th ..	A. B.	5	F.	Low Barmston	"	"	"	Shallow Well	None	Ashpit-privy	"		"	20
21	9th Dec.	A. R.	17	F.	Andrew's House	"	"	"	Upland	Sewer	Ash-closet	"	Not Enteric	"	21
22	14th ..	A. C.	49	M.	Bewick Main	"	"	"	Deep Well	"	"	"		Fatal	22
23	17th ..	M. S.	17	F.	Sacriston	"	"	"	Upland	"	Ashpit-privy	"	A case of Tubercular Meningitis	"	23
24	22nd ..	H. B.	13	M.	Birtley	"	"	"	"	"	Ash-closet	"		Continues ill	24

TABLE III.
CHESTER-LE-STREET RURAL DISTRICT.
Cases of Infectious Diseases notified during the Year 1907.

[illegible]

¹ Not cases of Enteric Fever.

² One not a case of Enteric Fever.

TABLE IV.
CHESTER-LE-STREET RURAL DISTRICT.
Causes of, and Ages at, Death during Year 1907.

CAUSES OF DEATH.	DEATHS IN WHOLE DISTRICT AT SUBJOINED AGES.							DEATHS IN LOCALITIES AT ALL AGES.—(TOWNSHIPS).																	PUBLIC INSTITUTIONS.							
	At all Ages.	Under 1.	1 to 5.	5 to 15.	15 to 25.	25 to 65.	65 and upwards.	Barnston.	Biddick, South.	Birtley.	Burnmoor.	Chesterle-Street.	Cocken.	Edmondsley.	Harraton.	Lambton.	Lanesley.	Lumley, Great.	Lumley, Little.	Onston.	Pelton.	Plawsworth.	Urpeth.	Usworth.	Waldridge.	Washington.	Witton Gilbert.	Dame Margaret's Home.	Earl's House Industrial School.	Isolation Hospital.	Workhouse.	
Smallpox																																
Measles	45	11	27	7						6	1	1		4	1		5	2	1		8	1	1	3	5	2	4					
Scarlet Fever	2		1	1								1									1									1		
Whooping Cough	4	2	2											1							3											
Diphtheria and Membranous Croup	19		13	6						4		4		1							3		1	3		1	2			1		
Croup																																
Fever {	Typhus																															
	Enteric	2				1	1			1							1															
	Other Continued																															
Epidemic Influenza	7		1	1	1	3	1			1		3							1					1			1					
Cholera																																
Plague																																
Diarrhœa	42	33	8		1					5	2	10	1				2	4	1	1	8	2		2		3	1					
Enteritis	6		4			1	1					1										1	2		2							
Puerperal Fever	8				2	6				3		2					1				2											
Erysipelas	1	1										1																			1	
Other Septic Diseases	12	1	1	2	1	4	3			2		3			1						1	2			2	1					2	
Phthisis	58		1	3	13	36	5			4	1	12		1	7		3	3	2		5	2	2	2	1	7	6				6	
Other Tubercular Diseases	57	20	18	11	5	3		1		7		12		3		1	4	1		1	5	4	1	3		5	9	3				
Cancer, Malignant Disease	49		1			31	17	1		6	1	14			2		4	3	1	1	6		3		1	3	3				3	
Bronchitis	58	25	9			6	18			10		10		3	2		2		1	1	12		3	6		5	3				1	
Pneumonia	135	36	44	8	4	27	16	2		17	3	18		5	4		7	6		2	15	6	4	13	3	8	22	1			1	
Pleurisy	5					3	2			1											2			1			1					
Other Diseases of Respiratory Organs	23	3	10	5	1	3	1			5		3		2	1		2				1			4		3	2					
Alcoholism .. } Cirrhosis of Liver }	8					7	1					4			1		1						1	1								
Venereal Diseases	2	1				1						2																				
Premature Birth	65	65						2		2	1	9		2	2		4	4			13	2	4	8	2	4	6					
Diseases and Accidents of Parturition	11				1	10						1					2				5				2	1						
Heart Diseases	93			2		49	42			8	1	27		2	7		8	4	1	3	9	3	8	2		6	4				10	
Accidents	39	3	3	5	11	12	5	2		6	1	9			3		5	1	1		2		2	2		4	1					
Suicides	8					8				1		3		1									3									
Diseases of Urinary System	31		3	1	1	14	12			2	1	4					5	1		1	4	1	3	3	1	1	4					
Cerebral Apoplexy	59					27	32			4	1	11		2	1		5		1		6	1	5	8		10	4				2	
Marasmus	38	32	6							7		6		2			3				6		2	2		9	1					
Meningitis	16	7	6	1		2				6		3					1	2			1		2			1						
All other causes	296	136	15	8	6	46	85	2		34	4	53		13	13	1	23	7	1	2	38	8	12	25	5	35	20				8	
All causes	1199	376	173	61	48	300	241	10		142	17	226	2	42	45	2	88	38	11	12	155	31	54	96	19	112	97	4		2	34	

Diarrhoeal Diseases.	{	Enteritis (<i>not Tuberculous</i>)
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District of Chester-le-Street:—

Population.

Estimated to middle of 1907.

72,911

Births in the year { legitimate .. 2,448
 { illegitimate .. 86
 Deaths in the year of { legitimate infants .. 353
 { illegitimate infants .. 23

Deaths from all Causes at all Ages 1,199

TABLE V.
CHESTER-LE-STREET RURAL DISTRICT.

INFANTILE MORTALITY DURING THE YEAR 1907

Deaths from stated Causes in Weeks and Months under One Year of Age.

[illegible]



TABLE VI.
UNCERTIFIED DEATHS DURING 1907.
 CLASSIFIED ACCORDING TO AGES AND LOCALITIES.

LOCALITIES.	At all ages.	Under 1 year.	1 year and under 2 years.	2 years and under 3 years	3 years and under 4 years.	4 years and under 5 years.	Over 5 years.	Percentage of uncertified to all deaths.
Barnston								
Biddick, South								
Birtley								
Burnmoor								
Chester-le-Street	6	1					5	2·65
Cocken								
Edmondsley	4					1	3	9·52
Harraton	1						1	2·22
Lambton								
Lamesley	3						3	2·22
Lumley, Great	1						1	1·13
Lumley, Little								
Ouston	4						4	33·33
Pelton	11	6	1				4	7·09
Plawsworth	1	1						3·22
Urpeth	2						2	1·85
Usworth								
Waldridge								
Washington	2	1					1	1·78
Witton Gilbert	2						2	2·06
Dame Margaret's Home								
Earl's House Industrial School								
Isolation Hospital								
Workhouse								
Totals	37	9	1			1	26	3·08

TABLE VII.
SMALLPOX IN 1907.
CLASSIFIED ACCORDING TO LOCALITIES AND MONTHS OF THE YEAR.

[illegible]

TABLE VIII.
SCARLET FEVER IN 1907.

CLASSIFIED ACCORDING TO LOCALITIES AND MONTHS OF THE YEAR.

LOCALITIES.	Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	TOTAL.
Barmston													
Biddick, South													
Birtley				1			4	3	2	1	1		12
Burnmoor													
Chester-le-Street ...	1	1			2	3	1	2	5	3	1	7	26
Cocken													
Edmondsley	3	2							1		3		9
Harraton	1												1
Lambton													
Lamesley		1	3	3	10	3	2	1	5	1		1	30
Lumley, Great													
Lumley, Little	1												1
Ouston		1	4							2			7
Pelton	2	3	2	1	7	4	1	1	3	2	6	7	39
Plawsworth													
Urpeth		1			1	1			1	2	1		7
Usworth	1	1	1				1	1	8	20	25	40	98
Waldridge		1											1
Washington	1					2	2		2	1	1	4	13
Witton Gilbert		1	2	4	5	1	1		1	2	2		19
Dame Margaret's Home													
Earl's House Industrial School													
Isolation Hospital ..							1						1
Workhouse													
Total	10	12	12	9	25	14	13	8	28	34	40	59	264

TABLE IX.

TYPHOID (ENTERIC) & CONTINUED FEVER IN 1907.

CLASSIFIED ACCORDING TO LOCALITIES AND MONTHS OF THE YEAR.

LOCALITIES.	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	TOTAL.
Barmston
Biddick, South
Birtley	1	...	...	...	1	...	...	1	...	...	1	4
Burnmoor	1	...	...	...	...	...	...	...	...	...	...	1
Chester-le-Street
Cocken
Edmondsley	1	...	...	...	...	...	...	...	1
Harraton	1	...	...	...	...	...	...	...	...	...	...	1
Lambton
Lamesley	1	1
Lumley, Great
Lumley, Little
Ouston
Pelton	1	1	...	...	...	...	...	...	...	2	...	4
Plawsworth
Urpeth	1	...	1	...	...	...	...	...	...	...	2
Usworth
Waldridge
Washington	1	...	...	1	...	1	...	3
Witton Gilbert	1	1	2	...	...	...	...	...	1	5
Dame Margaret's Home
Earl's House
Industrial School
Isolation Hospital
Workhouse
Totals ...	2	3	1	1	3	4	..	...	2	...	3	3	23

TABLE X.
DIPHTHERIA AND CROUP IN 1907.
CLASSIFIED ACCORDING TO LOCALITIES AND MONTHS OF THE YEAR.

LOCALITIES.	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	TOTAL
Barmston ...	...	...	...	...	...	...	...	...	...	...	...	...	...
Biddick, South ...	...	...	...	...	...	...	...	...	...	...	...	...	...
Birtley ...	...	...	1	5	...	...	2	1	3	1	1	3	17
Burnmoor ...	...	...	...	...	...	...	1	...	...	1	...	...	2
Chester-le-Street ...	6	...	2	1	...	...	2	1	2	1	1	2	18
Cocken ...	...	...	...	...	...	...	...	...	...	...	...	...	...
Edmondsley ...	...	...	...	...	1	...	...	1	...	1	2	...	5
Harraton ...	...	...	...	...	...	...	...	...	...	...	1	2	3
Lambton ...	...	...	...	...	...	...	...	...	...	...	...	...	...
Lamesley ...	...	1	...	...	1	1	2	1	2	...	4	1	13
Lumley, Great ...	...	...	...	...	...	...	...	1	...	...	...	...	1
Lumley, Little ...	...	...	...	...	1	2	1	...	...	...	...	...	4
Ouston ...	...	...	...	...	...	...	...	...	...	...	...	1	1
Pelton... ...	3	1	1	1	1	1	3	...	2	1	4	4	22
Plawsworth ...	...	...	...	1	...	3	...	1	...	...	...	...	5
Urpeth ...	1	1	...	...	...	2	1	1	1	3	1	...	11
Usworth ...	2	2	1	...	...	1	1	...	1	...	...	...	8
Waldridge ...	...	...	...	...	...	...	...	...	...	...	...	...	...
Washington ...	1	1	1	...	...	...	...	...	...	1	...	1	5
Witton Gilbert ...	...	...	4	2	1	...	1	2	2	...	...	...	12
Dame Margaret's Home ...	...	...	...	...	...	...	...	...	...	...	...	...	...
Earl's House Industrial School ...	...	...	...	...	...	...	...	...	...	...	...	...	...
Isolation Hospital ...	...	...	...	...	...	...	...	...	1	...	...	...	1
Workhouse ...	...	...	...	...	...	...	...	...	...	...	...	...	...
Totals...	13	6	10	10	5	10	14	9	14	9	14	14	128

TABLE XI.
PUERPERAL FEVER IN 1907.

CLASSIFIED ACCORDING TO LOCALITIES AND MONTHS OF THE YEAR.

LOCALITIES (Townships).	Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	TOTAL.
Barmston													
Biddick, South													
Birtley													
Burnmoor													
Chester-le-Street				1					1				2
Cocken													
Edmondsley													
Harraton													
Lambton													
Lamesley													
Lumley, Great													
Lumley, Little													
Ouston													
Pelton						1							1
Piawsworth													
Urpeth													
Usworth													
Waldridge													
Washington													
Witton Gilbert													
Dame Margaret's Home													
Earl's House Industrial School													
Isolation Hospital													
Workhouse					1								1
Total				1	1	1			1				4

TABLE XII.
ERYSIPELAS IN 1907.

CLASSIFIED ACCORDING TO LOCALITIES AND MONTHS OF THE YEAR.

LOCALITIES.	Jan.	Feb.	March.	April.	May.	June	July.	Aug.	Sept.	Oct.	Nov.	Dec.	TOTAL.
Barmston													
Biddick, South													
Birtley	2	1								1	1	1	6
Burnmoor													
Chester-le-Street			1	1	1				1			2	6
Cocken													
Edmondsley	1					1		1	1		1	1	6
Harraton			1			1							2
Lambton													
Lamesley									1				1
Lumley, Great											1		1
Lumley, Little						1							1
Ouston													
Pelton	2	2	4	2	1		2	1	1		2	1	18
Plawsworth						1			1	2			4
Urpeth					4		1		1			1	7
Usworth		1	2	2			3		1	3	3	2	17
Waldridge	1												1
Washington		3			1				2				6
Witton Gilbert						1					1		2
Dame Margaret's Home													
Earl's House Industrial School													
Isolation Hospital													
Workhouse					1								1
Total	6	7	8	5	8	5	6	2	9	6	9	8	79

TABLE XIII.

Birth-Rate, General Death Rate, Zymotic Death Rate, Diarrhœal Death Rate, and Infantile Death Rate in each Township during 1907.

TOWNSHIP.	Birth Rate per 1000.	General Death Rate per 1000.	Zymotic Death Rate per 1000.	Diarrhœal Death Rate per 1000.	Infantile Death Rate per 1000 born.
Barmston	39·11	17·00	.....	.....	82
Biddick, South .....	.....	.....	.....	.....	....
Birtley	40·75	19·16	2·15	0·67	159
Burnmoor	28·18	11·98	2·11	1·40	100
Chester-le-Street	29·47	16·28	1·16	0·72	151
Cocken	43·47	17·39	8·69	8·69	400
Edmondsley	37·41	17·65	2·52	.....	168
Harraton	26·94	14·99	0·33	.....	135
Lambton.....	33·11	13·04	.....	.....	400
Lamesley	26·53	14·78	1·34	0·38	126
Lumley, Great	38·92	18·96	2·97	1·98	192
Lumley, Little	21·66	12·54	2·29	1·14	105
Ouston	18·39	11·57	0·96	0·96	52
Pelton	43·69	20·40	3·02	1·05	201
Plawsworth	34·14	24·03	2·32	1·55	318
Urpeth	32·59	15·85	0·88	0·29	144
Usworth	40·76	12·58	1·04	0·26	90
Waldridge.....	26·82	12·74	3·35	.....	100
Washington	37·01	17·56	0·94	0·47	122
Witton Gilbert	37·00	15·47	1·11	0·15	146

TABLE XIV.

**POPULATION OF THE SEVERAL TOWNSHIPS IN
THE DISTRICT.**

ESTIMATED TO THE MIDDLE OF THE YEAR 1907.

TOWNSHIPS.	1901.			1906. Popu- lation.	1907.			
	Number of In- habited Houses.	Popu- lation.	Average per House.		Number of In- habited Houses.	Popu- lation.	Increase.	Decrease.
							As compared with 1906.	
Barmston	127	588	4·63	588	127	588	.....	.....
Biddick, South	11	38	3·52	42	12	42	.....	.....
Birtley	1083	5373	4·96	7271	1494	7410	139	.....
Burnmoor	292	1449	4·95	1449	286	1419	.....	30
Chester-le-Street	2329	11753	4·95	13528	2803	13875	347	.....
Cocken	20	100	5·00	115	23	115	.....	.....
Edmondsley	500	2524	5·04	2354	472	2379	25	.....
Harraton	542	2788	5·14	2869	584	3002	133	.....
Lambton	31	151	4·87	151	31	151	.....	.....
Lamesley	1074	5341	4·97	5705	1198	5954	249	.....
Lumley, Great	439	2004	4·56	2004	439	2004	.....	.....
Lumley, Little	96	562	5·85	643	150	877	234	.....
Ouston	153	963	6·29	1037	165	1037	.....	.....
Pelton	1145	5504	4·80	7521	1583	7598	77	.....
Plawsworth	270	1246	4·61	1304	280	1290	.....	14
Urpeth	523	2613	5·00	3205	681	3405	200	.....
Usworth	1132	6195	5·47	7384	1395	7630	246	.....
Waldridge	292	1491	5·10	1491	292	1491	.....	.....
Washington	897	4559	5·08	6238	1255	6375	137	.....
Witton Gilbert	1053	5300	4·89	5985	1282	6269	284	.....
Totals	12,009	60,542	5·04	70,884	14,552	72,911	2,071	44

TABLE XV.
CASES OF ENTERIC FEVER, 1907.

No.	Date of Notification.	Name.	Age.	Sex.	Locality.	Probable Cause.	Probable connection between one case and any other.	Probable connection between the cause of one case and any other.	Water Supply Source.	Drainage.	Method of Excrement Disposal.	Manner in which Scavenging is performed.	Remarks.	Termination.	No.
1	16th Jan.	M. L.	42	F.	Pelton		None	None	Upland	None	Ashpit-privy	Fair			
2	17th "	T. L.	23	M.	New Lambton	Unascertainable.....	"	"	Deep Well	Sewer	"	"	Probably Puerperal	Fatal	1
3	15th Feb.	M. W.	21	F.	Grange Villa.....	"	"	"	Upland	"	"	"		Recovery ..	2
4	21st "	E. P.	2	F.	Birtley	"	"	"	"	"	Ash-closet	Good		" ..	3
5	11th Mar.	J. T.	46	M.	Chester-le-Street	"	"	"	"	"	"	"		" ..	4
6	13th "	M. S.	16	F.	No Place	"	"	"	"	"	"	"	Ultimately admitted to Workhouse, and diagnosed as Pneumonia	" ..	5
7	16th April	J. W.	31	M.	Witton Gilbert.....	"	"	"	"	"	"	"		" ..	6
8	2nd May	A. G.	8	M.	No Place	"	"	"	"	Imperfect	Ashpit-privy	"		" ..	7
9	13th "	M. S.	27	F.	Blackhouse	"	"	"	"	Sewer	"	"		" ..	8
10	20th "	A. B.	14	F.	Sacriston.....	"	"	"	"	"	"	"		" ..	9
11	5th June	A. M.	23	F.	Washington Station ..	"	"	"	"	"	"	"		" ..	10
12	20th "	M. B.	42	F.	Sacriston.....	Previous case in house	No. 10	"	Deep Well	"	"	"		" ..	11
13	" "	J. B.	16	M.	"	"	" 10	"	Upland	"	"	"		" ..	12
14	23rd "	J. A.	9	M.	Birtley	Unascertainable.....	None	"	"	"	"	"		" ..	13
15	9th Sept.	J. A.	8	F.	Washington Station ..	"	"	"	Deep Well	"	Ash-closet	"		" ..	14
16	14th "	J. G.	22	M.	Birtley	"	"	"	Upland	"	W. C.	"		" ..	15
17	6th Nov.	J. T.	70	M.	Beamish	"	"	"	"	"	Ashpit-privy	"		Fatal	16
18	15th "	R. T.	29	M.	Grange Villa.....	"	"	"	"	"	Ash-closet	"	Not a case of Enteric	Recovery ..	17
19	22nd "	W. W.	15	M.	Washington Station ..	"	"	"	Deep Well	"	"	"		" ..	18
20	26th "	A. B.	5	F.	Low Barmston.....	"	"	"	Shallow Well	None	Ashpit-privy	"		" ..	19
21	9th Dec.	A. R.	17	F.	Andrew's House	"	"	"	Upland	Sewer	Ash-closet	"	Not Enteric	" ..	20
22	14th "	A. C.	49	M.	Bewick Main	"	"	"	Deep Well	"	"	"		Fatal	21
23	17th "	M. S.	17	F.	Sacriston.....	"	"	"	Upland	"	Ashpit-privy	"	A case of Tubercular Meningitis	"	22
24	22nd "	H. B.	13	M.	Birtley	"	"	"	"	"	Ash-closet	"		Continues ill	24

APPENDIX A.

SCHEDULE OF MEDICAL INSPECTION.

I.—Name..... Date of Birth
 Address School.....

II.—Personal History :

(a) Previous Illnesses of Child (before admission).

Measles.	Whooping Cough.	Chickenpox.	Scarlet Fever.	Diphtheria.	Other Illnesses.

(b) Family Medical History (if exceptional).

	I.	II.	III.	IV.	I.	II.	III.	IV.
1. Date of Inspection ...								
2. Standard and Regularity of Attendance.								
3. Age of Child								
4. Clothing and footwear								
[III.— <i>General Conditions</i>]								
5. Height								
6. Weight								
7. Nutrition								
8. Cleanliness and condition of skin.								
Head								
Body								
[IV.— <i>Special Conditions</i> .]								
9. Teeth								
10. Nose and throat								
Tonsils								
Adenoids								
Submax. and cervical glands.								
11. External eye disease								
12. Vision								
R.								
L.								
Medical Officer's initials								

General observations.

Directions to Parent or Teacher.

